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ABSTRACT

An investigation ascertained, analyzed, and documented competency standards and certification requirements for secondary-level vocational food service programs. A literature review produced no instruments used in past studies to measure the attitudes of food service professionals toward task competencies. Six occupations were selected for the development of the task analysis: cook/chef, cook assistant, short order cook, food preparation helper, baker's helper, and food service worker. The questionnaire was composed of two basic parts: a proficiency variable and a frequency variable. Tasks were identified by teachers, food service supervisors, and management personnel. Questionnaires were returned by 488 of 600 food service management personnel throughout Connecticut. Survey findings indicated the recommended development of a competency-based food service curriculum that (1) focuses especially on sanitation standards, communication skills, human relations, and student demonstration of task competency; (2) promotes critical thinking and provides a practical application of the basic skills; and (3) addresses the needs of the food service industry today and is adaptable to various professional settings. (Over 40 pages of tables present task analysis results showing statistical analysis according to proficiency and frequency of individual tasks and a cross analysis of results. Appendixes include the questionnaires and an extensive bibiligraphy.) (YLB)

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THE UNIVERSITY OF NEW HAVEN

INVESTIGATION AND DEVELOPMENT OF COMPETENCY STANDARDS AND CERTIFICATION REQUIREMENTS FOR SECONDARY-LEVEL VOCATIONAL FOODSERVICE PROGRAMS

FINAL REPORT

Prepared by

RONALD A. USIEWICZ, Ph.D.

Submitted to:

Division of Vocational/Technical and
Adult Education
Connecticut State Department of Education
Hartford, Connecticut

In Partial Fulfillment of Contract PS 85-1910

October 31, 1985

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Finally, the University of New Haven gratefully acknowledges the hard work and commitment of the staff who labored to successfully complete this project:

. Linda Carlone, Administrative Assistant, University of New Haven and

. Judith Smith, Graduate Assistant, University of New Haven.

Preface

On June 25, 1984, the University of New Haven was retained by the Connecticut State Department of Education to develop competency standards and certification requirements for secondary-level vocational foodservice programs. From July 1, 1984 through July 22, 1985, under Contract P.S. 85-1910, University of New Haven.

> "....develop(ed) competency standards in relationship to a task analysis that will assist teachers of foodservice programs to improve the quality of their students through curriculum standardization...."

This final report is submitted to the State Board of Education and the Division of Vocational/Technical and Adult Education in partial fulfillment of the requirements of this contract.

Executive Summary

The current need for trained personnel has fostered excellent career opportunities for students enrolled in and completing vocational and technical foodservice programs. The foodservice industry, including the commercial and private baking segment, is one of the most important and dynamic industries in the United States. Industry sales are increasing 10-12 percent yearly which equals nearly five percent of the nation's gross national product. The typical person in this country consumes approximately twenty-five percent of all meals away from home. As the economy continues to rebound in 1986, the foodservice industry will move into a new and exciting phase of development. For the next several years, it is expected that demand for foodservice will increase at a steady rate with only minimal distortions in certain markets.

Vocational and technical programs in foodservice vary as widely as to the types of foodservice and bakery establishments, and there has been little effort to standardize requirements or identify competencies for different foodservice occupations. The first step in planning and evaluating educational programs is the description of competencies required for successful functioning in an entry-level position. These statements can be developed from a survey of foodservice experts in actual operations.

The Connecticut State Department of Education seeks to develop curriculum that will enable teachers to be more effective in their programs and help to improve the training of foodservice students. This report describes the results of a project whose purpose was to identify competencies through an

occupational task analysis. This method would serve to inform teachers of the occupational tasks that need to be mastered for successful performance within the given occupations. The task structure is intended to provide the teacher with information about the importance of each task, so that the instructor can work with the student to determine the level of competency that should be included in the foodservice curriculum.

The selection of occupations for which the task analysis was based were selected from the Directory of Occupational Titles. The selection of occupations were initially agreed upon by the Division of Vocational, Technical and Adult Education of the Connecticut Department of Education.

Interpretation of Data

The review of literature produced no instruments used in past studies to measure the attitudes of foodservice professionals toward task competencies.

The following six occupations were selected for the development of the task analysis: cook/chef, cook assistant, short order cook, food preparation helper, baker's helper, and foodservice worker. The questionnaire was comprised of two basic parts: the first being a proficiency variable, and the second a frequency variable. The format developed for the task analysis follows.

FORMAT FOR ANALYSIS

OCCUPATION: _____

COMPETENCIES:

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C

The tasks for the instrument were identified through personal interviews with twenty-three (23) secondary comprehensive high school and vocational technical foodservice teachers, and twenty-seven (27) supervisors and management personnel of foodservice and bakery related establishments.

These statements were categorized by subject matter pertaining to the six occupational titles; reviewed for redundancy and ambiguity, for relative simplicity, for ease of understanding and for length.

The instrument was summative in design. Each item within the final instrument was a five step scale ranging from "complete proficiency" to "no proficiency". The proficiency scale consists of five ratings:

1. No Proficiency
2. Slight Proficiency
3. Moderate Proficiency
4. Considerable Proficiency
5. Complete Proficiency

Five scale steps were chosen for the following reasons: there is always an advantage in using more rather than fewer steps and Nunnally supports this by the following:

> This is demonstrated by the numerous studies showing that the reliability of individual rating scales is a monotonically increasing function of the number of steps....As the number of scale steps is increased from 2 up through 20, the increase in reliability is very rapid at first. It tends to level off at about 7, and after 11 steps, there is little gain in reliability from increasing the number of steps.
>
> .....the use of a 'neutral' step introduces response styles. Some subjects tend to use the 'neutral' step more than others, and individual differences in that regard might not relate highly to the attitude in question.

To provide answers to the research the following statistical analysis was used. Each individual task was rated according to two variables: the first being proficiency; the second frequency.

The frequency scale has three ratings:

A. Never

B. Frequently

C. Constantly

Based on the ratings responded, a Raw Percentage Value was calculated for each task in terms of the proficiency rating response and the frequency rating response. These raw percentages determine the proportion of total respondents who rated the task with a specific level of proficiency. A raw percentage was also calculated to determine the number of total respondents who rated the task with a specific frequency. For example: 20 percent of the respondents rated task number one with a "complete proficiency" or "5". Or 47 percent of the respondents rated task number one with a "constantly" frequency score, or "C". Once these raw percentages were calculated for all tasks in terms of both variables (proficiency and frequency) a distribution was completed for each task.

The criteria for the frequency distribution is as follows: If over 50 percent of the respondents rated the task with four (4) or five (5) to the proficiency question AND a "C" to the frequency question; that task would be included for further analysis. Tasks which did not meet both criteria were excluded from further analysis. The maximum value of this percentage would be 200; (i.e., if 100 percent of the participants responded 4 or 5 to the proficiency question with a "C"

rating). The minimum value is 100. (i.e., 50 percent of the participants responded 4 or 5 to the proficiency question with a rating of "C").

The next phase produced a ranking of the raw percentage score to indicate the relative importance of the task. This ranking was done within each of the six (6) occupational titles to determine those tasks considered important for that job.

In reviewing the Results of Task Analysis Questionnaire (Appendix B) one will see the job title, in ranked order of importance, and the raw percentage score of the task, (this score being a number ranging from 100 to 200). The raw percentage score, is the number of the task as it appears on the questionnaire.

In some cases, several tasks received the same raw percentage score listed individually under this score and are listed in the order in which they appear in the questionnaire.

Population

The population for this study was comprised of foodservice management personnel throughout the State of Connecticut.

The population for the investigation was further classified into the following groups:

1. Restaurant Managers and/or Supervisors.
2. Institutional Foodservice Administrators.

3. Bakery Owners/Management Personnel.

4. School Lunch Management/Supervisors.

5. Foodservice Management Administrators in Lodging Operations.

6. Fast Food Managers and/or Supervisors.

7. College/University Foodservice Management and/or Supervisors.

The total population of 600 Foodservice related Management Administrators was identified through the use of the following:

1. National Restaurant Association Directory.

2. Connecticut Restaurant Association Directory.

3. Connecticut Bakers Association.

4. Multi-Unit Foodservice Association Directory.

5. American Dietetic Association Directory.

6. National Association of College and University Foodservice Managers.

7. American Hotel/Motel Association Directory.

8. Connecticut Hotel/Motel Association Directory.

Of the original population, 100 of these were specifically identified as being associated with the bakery profession. This group was sampled separately to identify the task competencies of the occupational title "Baker's Helper".

Instrument Response

After the research instrument and cover letter were reviewed and modified and the sample selected, the questionnaires were personally delivered to the population. This sequence was completed through the utilization of seventeen graduate students from the University of New Haven. This researcher felt that the individualized attention

would result in a significantly higher response rate.

In addition, each participant was given the option of having the graduate student return and pick-up the questionnaire. If this was not satisfactory, a stamped, self-addressed envelope was included with the cover letter to facilitate the return of the instrument.

Results

A cross analysis of results were computed for the six occupational job classifications with all categories showing tasks with .05 significance. The following tasks are in rank order of importance.

Maintain a clean and sanitary work station.

Show personal qualities as good grooming, cooperative and appropriate dress.

Use time efficiently, practice teamwork, and self-direction.

Perform tasks responsibly, efficiently and demonstrate good work habits.

Maintain positive human relationships while working with others.

Use of all kitchen cooking equipment correctly, small (hand) and large equipment.

Use safe techniques in performing foodservice tasks.

Understand and meet the standard of excellence in food quality.

Handle dishes, food and beverage in a sanitary way.

Know appropriate dress for safe working.

Adheres to institutional tardiness policy.

Report to supervisor any equipment in need of repair.

Follow posted work schedule.

Be able to identify spoiled/inedible meat, fish and poultry.

Be able to weigh and measure dry and liquid ingredients.

Know proper storing of meat, fish and poultry.

Know correct thawing techniques for meat, fish and poultry.

Know various care, storage and cutting techniques for vegetables.

Identify abbreviation for measurements in food production.

Leftover foods are labelled, dated and properly refrigerated.

Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.

Apply knowledge and skill acquired in the classroom to work experience.

Use of all kitchen cooking equipment correctly; oven, broiler, deep-fryer, microwave.

Identify and use correctly small equipment; hand utensils, can opener, blenders.

Identify, use and care for knives properly.

Recommendations

Based upon the findings, conclusions and implications resulting from this exploratory research, the writer feels it appropriate to offer a number of suggestions:

I. Develop a competency-based foodservice curriculum which:

   A. Focuses especially on:

      a. sanitation standards

      b. communication skills

      c. human relations

      d. student demonstration of task competency

   B. Promotes critical thinking and provides a practical application of the basic skills.

   C. Addresses the needs of the foodservice industry today and is adaptable to a variety of professional settings and the changes inherent in a dynamic society.

II. In addition to meeting the certification requirements of the State of Connecticut, teachers of foodservice programs should be required to update their technical skills through continuing on-the-job practical experience and inservice workshops.

III. The foodservice industry should provide ongoing input in order to determine the effectiveness of the competencies established by this research study.

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I. STATEMENT OF PROBLEM

The purpose of this investigation is to ascertain, analyze and document competency standards and certification requirements for secondary-level vocational foodservice programs.

More specificially, the study will attempt to clarify and determine:

(a) the availability of opportunities in the foodservice area to competent students who show interest and desire to work with foods.

Proposed instructional units include planning, preparation, serving food on a quality basis, use and care of commercial equipment, safety sanitation practices, nutritive values, purchasing, storing, special diets, and record keeping of supplies. Supervised laboratory and/or work experience provide skill development in the many aspects of food-service. Advanced training includes additional experiences in the planning and serving of food, and in the managerial and supervisory aspects of foodservice.

The areas of competency include the use and care of equipment, safety and sanitation practices, handling and storage of foods and some knowledge of the basis of food preparation. The fundamental skills in quantity food preparation are acquired through demonstration, laboratory and cafeteria experiences.

Additional curricular areas include knowledge of institutional food and operational procedures with additional experience in quantity food

preparation and management of food. The knowledge of service operations is gained through in-school restaurant situations and on-the-job training.

Graduates from this program can expect to seek employment in food-service establishments such as restaurants, cafeterias, nursing homes, hospitals, drive-ins, and other related fields. The training students receive on the secondary level should help the student advance more rapidly on his job. Through their own initiative, experience, interest, and motivation, the students will reach their maximum potential or goal.

(b) Proposed entry-level competencies established for the following occupational titles:

Foodservice worker

Cook Assistant

Short Order Cook

Food Preparation Helper

Baker's Helper

Cook/Chef

(c) Existing competencies, standards, and/or certification requirements which have been established for secondary-level foodservice programs by other states.

(d) The cooperation necessary with the foodservice industry through its associations.

There are three primary target groups which will benefit directly from the project's results:

(a) Students who show interest and desire to work with foods;

(b) The restaurateur who will determine student competencies; therefore, will be more willing to employ students from a certified secondary-level vocational foodservice program;

(c) Instructors of foodservice programs will be able to determine and implement foodservice program competency standards.

The project will attempt to determine the educational needs of the state and/or community in regard to the stated problem. The needs may be illustrated through the following areas of emphasis:

(a) Curriculum and Instruction. Guiding statement: The curriculum and instruction should be planned to assure that students will have the opportunity to gain the necessary educational and occupational experiences required for employment in the foodservice industry. Points to Consider:

1. Analysis of jobs performed in the various operations is made.
2. The students are trained for jobs in foodservice by repeating techniques until definite skills are developed.
3. The students are inspired to achieve success in the foodservice industry and to work toward advancement in his field of endeavor by a variety of experiences such as research studies, field trips, speakers, films and

counseling and practice on a variety of equipment.

4. Current instructional materials are used which include manuals of operation of commercial equipment, texts on institutional foods,reference materials on nutrition, foods, human relations, management, and consumer education, and aids such as transparencies, films, and filmstrips.
5. A youth organization functions as an integral part of classroom instruction offering social and leadership development and responsibility to the community.
6. An advisory committee is established to make recommendations for improvement, expansion, and development of the food-service program and to relate the program to the community.

(b) Facilities and Equipment. Guiding statement: The facilities and equipment should be of the nature that affords the students the opportunity to develop the necessary understandings and competencies as prescribed in the program objectives and curriculum.

Points to Consider:

1. A variety of equipment is available for skill development experiences. Different types of foods for various sized groups and occasions which allow individual students to develop creativity.
2. Provision is made for facilities and equipment similar to those found in institutional food operations in which the students are being trained to work.

3. The equipment is arranged in well-defined stations with efficient storage and work surfaces for use of quantity equipment.
4. Space is provided to allow for efficient and safe movement of every student in the class in all preparation, serving, and clearing centers.
5. There is evidence of well planned flow of deliveries from the receiving area of checking, to proper and adequate storage, to accessibility for preparation of food.
6. A related classroom that is equipped for demonstration purposes is easily accessible to laboratory facilities.
7. Sufficient and sanitary restrooms, dressing facilities, lockers, and space for both boys and girls is easily accessible.
8. Office space for teacher-coordinator and cook manager with sufficient office equipment and storage to maintain records and teaching resources, is located so that the entire laboratory is visible.
9. There is flexibility in use of the large and small equipment with sufficient utilities for operation in a variety of places and the equipment is sufficiently mobile to allow for sanitation.

(c) Instructional Staff. Guiding Statement: The instructional staff should show evidence of possessing the necessary professional and technical qualifications required to administer and conduct an effective vocational education foodservice program.

Points to Consider:

1. The teacher has the skills, knowledge and ability to:
   a. select, use and care for the equipment required in the foodservice program;
   b. plan and prepare the quantity and quality of foods required by the food industry;
   c. organize the learning experiences required in food production so that the effective use is made in time, energy, money, and personnel;
   d. recognize the special needs and abilities of the students which are requirements (to succeed) in the foodservice program;
   e. accept the physical demands required in teaching a foodservice program;
   f. promote the foodservice program in the school and identify the most desirable job locations for students.
2. The teacher assumes responsibility for professional growth by studying publications, attending in-service meetings or continuing educational studies.

3. The teacher maintains a professional attitude, a concern for good grooming, and an enthusiasm for promotion of the program.

4. The teacher has graduated from an accredited institution in home economics which has met certification requirements in Institutional Food Service as spelled out by the Division of State Certification.

(d) Students. Guiding statement: Students should show evidence of having the interest and necessary qualifications to actively pursue and succeed in a career in foodservice.

Points to Consider:

1. Students show interest in foodservice occupations or careers;

2. Students present evidence of capabilities, aptitudes, and attitudes required to succeed in the industry;

3. Students are capable of meeting health requirements for a "Food Handlers' Card" (negative X-ray reports);

4. Students are interested in related youth organizations.

(e) Product Review. Guiding statement: Product review is the examination of students after they have completed or left the instructional program. This review is to focus on the data and information which is available regarding recent graduates and students who were enrolled in the program within the last five years.

Points to Consider:

1. There is an annual follow-up of students who complete the instructional program.
2. There is evidence which identifies the students who obtained full-time or part-time employment in the occupational area for which instruction was provided.
3. There is a low proportion of former students who are unemployed.
4. Consideration is given to those individuals who do not enter the labor market because of armed services, marriages, and illness.
5. Students who continue their education after completing the instructional program are also accounted for in a review of former students.
6. Evidence indicates that the students are satisfied with the instructional program and the effect it has had on their obtaining initial employment.
7. Community support for the program is reflected by the request from employers for those completing the program.
8. Average hourly wage earnings of graduates employed full-time in the occupational area are available.
9. Standardized measures are used to identify occupational strengths of the instructional program and individuals.

II. INTRODUCTION

Food Service--An Expanding Industry

The current need for trained personnel has fostered excellent career opportunities for students enrolled in and completing comprehensive, vocational and technical foodservice programs. The foodservice industry, including the commercial restaurant and bakery segment, is one of the most important and dynamic industries in the country. Providing away-from-home meals constitutes one of the largest and fastest growing industries of labor and commerce; sales increased 80 percent and employment increased 60 percent during the 1973-1983 decade.

Due to rapid expansion and growth of the foodservice industry in the United States, manpower shortages and labor turnover have been two of its major problems. According to the Department of Labor survey in May of 1983, "...total industry job vacancies in the foodservice industry were approximately 335,000 for non-management personnel, and 28,000 management positions available."[1]

An explosive rate of expansion is predicted both nationally and internationally for foodservice enterprises during the coming decade. Nations around the world are urging American foodservice systems to operate in their countries. Underdeveloped nations seek the growth which foodservice generates. Older countries seek economic stimulation provided by hospitality. Virtually all nations are looking for American talents and know-how in foodservice operations.

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[1]U.S., Department of Labor, Surveyof Labor (Washington, D.C.: Government Printing Office, May 1983).

All of these conditions generate an unprecedented demand for competent foodservice employees with motivation, experience, and education, who can move with the tide and start climbing the career ladders to successful and meaningful careers in the foodservice industry.

In a paper delivered by Henry A. Montague, Chairman of the Board of Greyhound Food Management, Inc., and past president of the National Restaurant Association, at a national meeting emphasizing education for the industry, it was estimated that 250,000 new workers will be needed in the foodservice industry each year for the ten-year period between 1981-1991.

The Vice President and Senior Economist of the J. Walter Thompson Company, Arne H. Johnson, delivered a paper before the 1966 annual meeting of the Council on Hotel, Restaurant, and Institutional Education in which it was estimated that the annual $23 billion volume of business in the foodservice industry in 1966 would more than double by 1980. Mr. Johnson's forecast was quite modest, since industry sales of more than $133 billion in 1983 equal nearly five percent of the nation's gross national product. More than 560,000 separate establishments employ eight million people, the largest percentage of whom are teenagers. More than 77 million customer transactions occur each day in commercial foodservice establishments, and nearly eighty percent of all families report that they eat out regularly. The typical person in this country consumes approximately twenty percent of all meals away from home.[2]

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[2]John D. Lesure, "Restaurant Industry Operations Report," Laventhol and Horwath Report (1982): 5-6.

As the economy begins to rebound in 1985, the foodservice industry will move into a new and exciting phase of development. For the next several years, it is expected that demand for hospitality services will increase at a steady rate with only minimal distortions in certain markets.[3] It should be noted that Mr. Johnson's predictions were for the public for-profit (commercial) operations in the foodservice industry only. To this market, another should be added--the tremendous market that is developing in the private segments of the foodservice industry and the increase predicted in the lodging and tourism industries.

The convention and group business market has been developing beyond expectations. Air transportation, as well as the rapidly-expanding interstate systems, have created the demand for many new public hospitality accommodations. Foreign travel in the United States and abroad has reached an all-time high. Predictions are that it will continue to grow at a record-breaking pace. National and international chain and franchise organizations in the public foodservice industry are expanding as rapidly as the availability of trained personnel will allow.

Another segment of the industry is also growing at a phenomenal pace. Institutional housing for students, homes for the aged,nursing and convalescent homes, hospitals, retirement houses and developments, in-plant and institutional feeding, and catering for airline passengers are but a few of opportunities in this segment of the industry.

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[3]Randall Smith, "The U.S.Lodging Industry Today and Tomorrow," Hospitality Education and Research Journal 8 (1983): 39.

All areas of the hospitality industry need qualified and trained employees.

Yet, surveys indicate that the potential foodservice market has hardly been tapped. Over fifty percent of our population has never spent a night in a hotel or motel. Transportation companies' expansion programs are unprecedented. Leisure time for all Americans will increasingly make travel and away-from-home dining more popular and possible.

Part-time, full-time, day or night for male or female, seasonal, technical or non-technical, for the high school age youth or mature adult, are some of the varied job opportunities and working conditions. Since the foodservice industry is so diversified, there are job openings for practically every individual ranging from the highly technical positions to the entry non-technical jobs.

Improved working conditions offer the opportunity for shorter work weeks, flexible schedules, or night, weekend, or holiday work, to allow the student to earn extra pay or hold a second job. Wages and fringe benefits are comparable to other service-type industries.

Advancement opportunities, challenging work, and on-the-job training programs in a growing, dynamic industry are some of the values associated with foodservice careers. There are opportunities in the small independent business or in the large corporation, both of which may provide job security, job status, and an excellent salary.

State of the Foodservice Industry

It is the feeling of this researcher that in order to comprehend the vastness of the foodservice industry in relationship to growth

and employment potential, an in-depth overview of the industry's economic forecast is necessary.

"The National Restaurant Association projects foodservice industry sales will total $157 billion in 1985--a gain of 8.9 percent over 1984's $144.2 billion level," announced NRA Chairman of the Board and President Joe R. Lee. Sales, unadjusted for inflation, would increase by $12.8 billion in 1985 compared with the $10.0 billion advance recorded in 1984.[4]

"Real sales, adjusted for inflation,continue to post significant gains," Lee reported. The industry will record real sales growth for four consecutive years, an improvement over the real sales declines for 1979 and 1980. In 1985, real sales for the foodservice industry will be up 3.5 percent, following advances of 3.7 percent in 1984, 1.1 percent in 1983 and 0.5 percent in 1982.

NRA's forecast for strong real sales gains is based on robust economic growth during 1985 along with moderate inflation, rising consumer incomes, and a bright employment picture. However, large federal budget deficits and the threat of high interest rates could dampen economic growth and mitigate sale advances for the foodservice industry.

Food and drink sales in the Commercial Feeding Group, which accounts for 85 percent of total foodservice industry sales, should

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[4]"The National Restaurant Association's Annual Industry Forecast," The National Retaurant News 11 (December 1984):11-22.

equal $133.9 billion in 1985--up 9.3 percent from the previous year. This compares favorable with the somewhat slower 8.7 percent increase recorded in 1984. Real sales in the commercial sector will continue to post significant gains--up 4.0 percent in the 1985 versus 4.3 percent in 1984 and 1.3 percent in 1983.

Foodservice sales in the Institutional Feeding Group should record real sales growth of 1.0 percent in 1984, up slightly from the 0.6 percent advance in 1983, and a considerable improvement over the 0.4 percent decline in 1982.

Food and drink sales in the Military Feeding Group are expected to post strong real growth in 1985--up 3.7 percent.

Menu prices should rise somewhat faster in 1985 than in 1984, due to slightly high food and overhead expenses. Prices for food away from home will be up 5.3 percent in 1985, compared with a gain of only 4.3 percent in 1984.

In 1984, the U.S. economy grew at a very rapid pace, following one of the worst recessions in this nation's history. Consumers' confidence in their short-term and long-term financial outlook reached new highs, and this resulted in increased consumer spending. Industrial production rose as the nation's manufacturers rushed to supply the needed autos, houses, and appliances that Americans had wanted to buy but had foregone due to their poor financial situations. In addition, inflation continued to moderate, rising by about 3.4 percent in 1984, compared with significantly larger advances of 6.8 percent in 1983 and 9.6 percent in 1982.

Unemployment began to decline as corporations started recalling laid-off workers and hiring new ones. Interest rates declined slightly and consumers were more amenable to making large credit purchases for houses, autos, and even vacations.

The foodservice industry was a prime beneficiary of the improving economy. Traffic at the nation's eating places rose during the first three quarters of 1984, and continued to increase during the final months. Breakfast easily captured the number-one spot in terms of increased traffic counts. Dinner traffic continued strong, and traffic for the midday meal showed marked improvement over 1983 levels.

Fast food and family restaurants continued to do well, as consumers--still careful about their eating-out expenditures--frequented these establishments. Atmosphere/specialty restaurants posted their best performance in the second half of 1984 when consumers began to feel much better about their financial situations and opted to trade up to expensive eating places.

All this resulted in the industry's best real sales performance since 1977, and has set the stage for continued growth during 1985.

The consensus forecast for 1985 indicates that the U.S. economy will grow at a robust rate, and the strong recovery begun in 1984 will continue. Real Gross National Product (GNP) will advance a healthy 5.3 percent in 1985, equaling 1977's gain of 5.3 percent. Inflation will rise at a slightly faster pace in 1985 than in 1984--5.0 percent versus 3.4 percent. Higher food prices, particularly near

the end of the year, along with higher housing and energy costs, will put some upward pressure on consumer prices. However, the overall advance in inflation will be considerably below the 6.8 percent and 9.6 percent gains in 1983 and 1982, and well below the double-digit increases experienced in 1979 and 1980.

Consumers are earning more, and personal income is expected to increase 9.5 percent in 1985.

In spite of higher social security, state and local taxes, economic forecasters expect real disposable income (adjusted for inflation,) to be up 4.6 percent in 1985--considerably higher than the 3.4 percent advance in 1984.

The number of people who are unemployed will continue to decline in 1985. Industrial production began rising in 1984 and is expected to continue at a healthy pace in 1985. This means that manufacturers have and will be calling back laid-off workers and even hiring new employees. However, the nation's unemployment rate will remain at an historically high figure because the so-called "smokestack" industries (autos, steel, tires,) will not have jobs for many laid-off workers. The nation's unemployment rate will average 8.5 percent in 1985, down 1.2 percentage points from 1984's 9.7 percent rate.

The nation's factories will be busy producing much needed goods in 1985. Industrial production will be up 9.3 percent in the prior year. Housing starts will equal about 1.8 million units, approximating 1984's figure of 1.7 million. Pent-up demand for automobiles will result in increasing numbers of new car sales--10.4 million in 1985

on top of 9.2 million in 1984. In addition, this pick-up in housing starts and car sales will fuel increased activity in other industries, such as furniture, appliances, tires, and auto parts.

The negative factors facing the U.S. economy in 1985 are high interest rates and large federal budget deficits, both of which could dampen economic growth. However, the economy in 1984 was able to grow at a very robust pace in spite of these factors, and the consensus is that this will also be true in 1985. The large number of unemployed persons could also be considered a negative factor in 1985, but most economists do not believe that this will seriously dampen consumer spending and economic growth. Prior years' experience has led many to the conclusion that it is the fear of being unemployed which is more detrimental to growth. With the unemployment rate dropping, people are less and less afraid that they will find themselves without a job. All in all, the economic climate in 1985 should be healthy, and this is good news to the foodservice industry.

Consumers are optimistic about their futures. Rising incomes, relatively low inflation, and declining unemployment brighten the outlook for most households. As mentioned earlier in this report, real disposable income is forecasted to rise 4.6 percent in 1985, compared with a slower 3.4 percent gain in 1984.

Consumers are now poised to spend. Pent-up demand for many goods and services will result in strong retail sales in 1985. In particular, consumers will be purchasing appliances and furniture for new homes or to redecorate old ones. New cars will be purchased as the public rushes to replace old automobiles.

The picture also looks bright for spending on non-durable items such as restaurant meals. A recent survey conducted by the Gallup Organization for the NRA revealed that four out of 10 people want to eat out more often than they are now doing, and most of these would like to dine in restaurants one or two times more per week. Thus, with rising incomes and improved consumer sentiments, many of these consumers will be able to fulfill their wishes.

Foodservice patrons will continue to expect and demand quality from the establishments they visit in 1984. They want good food, friendly service, and pleasant and clean surroundings. And, of course, they want value for their dollar. These people are also looking for convenience. The meal out is more often a necessity with today's not-so-traditional households. As a result, patrons want restaurants close to home, work, and shopping, and they want fast and efficient service.

In 1985 consumers will continue to be interested in health and nutrition. Research conducted by the National Restaurant Association disclosed that many patrons, four out of 10, have changed their away-from-home eating habits by their consumption of fruits, vegetables, and whole grains, or by decreasing their consumption of refined sugar, animal fats, and salt. In particular, these people report that they are using less salt; ordering more fish, vegetables, salads, and poultry, and ordering less red meat, fried foods, and starches.

All in all, restaurateurs can expect increased traffic and increased sales in 1985. Restaurant patrons will likely dine out more frequently than in prior years, and they will spend more. These customers will be more demanding and they will expect to find good, healthy food along with fast, friendly service, pleasant surroundings, and value for the dollar when they dine away from home.

The foodservice industry in 1985 will be operating in a complex environment. Our industry must comply with the laws and regulations at the federal, state, and local levels. These laws and regulations mandate how much restaurateurs must pay their employees, which employees can serve alcoholic beverages, what hours the operation should remain open, and how to comply with sanitation and safety standards. In 1985, the scope of many of these laws and regulations will depend on the mood of federal and state legislators and the activities of many consumer groups.

The primary issues facing the foodservice industry in the near future include:

- labor issues, such as minimum wage and tip credit
- liquor issues, such as third-party liability and minimum drinking age
- tax issues, such as tip reporting requirements and the deductability of the business meal
- smoking/non-smoking issues
- truth-in-menu issues
- use of additives and preservatives, as well as
- sanitation

Some of these issues can have a direct effect on foodservice sales, such as the tax-deductible business meal. Others can affect the cost of doing business, such as minimum wage rates and the tip credit allowance. Still others are likely to have an effect on employee relations, such as tip income reporting requirements.

Foodservice operators are prepared to meet the challenges and opportunities facing them in 1985. Consumer needs and desires, along with operator plans to find profitable market niches, will be the major forces behind the changes in the industry in 1985. Restaurateurs will be offering new menu items, redecorating their restaurants, developing new restaurant concepts, placing increased emphasis on quality, and designing new promotion and advertising campaigns.

The public's interest in health and nutrition will lead to increased offerings of light and natural foods, more whole grain breads, and less salt and fats used in food preparation.

Ethnic food items will continue to be popular. A recent NRA consumer survey revealed that Italian, Chinese, Mexican, French, and Japanese foods are five of the most popular ethnic foods in restaurants. These foods will probably retain their popularity, as many consumers reported that they will continue to order ethnic dishes in foodservice operations and would try more such dishes if they were available.

Operators will be adding new items to their menus to take advantage of these consumer preferences. At the same time, they will

closely examine their offerings and eliminate those items that are poor sellers or those which do not complement their concept.

Foodservice operators will be redecorating their establishments in response to changing demographic patterns. Fewer children and an aging population will result in a more adult atmosphere. Chairs will be more comfortable, decor will be more natural-looking with plenty of light and live plants, and the restaurant will be quieter. All this will make the place more inviting to customers who want the meal to be relaxing and enjoyable.

Foodservice operators will be taking traditional fast food concepts and repositioning them as upscale restaurants. Hamburgers are being sold in a non-fast food atmosphere with patrons having the option of ordering alcoholic beverages with the meal. Upscale chicken places will feature baked chicken and chicken served with herbs and spices. Italian-oriented restaurants will focus on veal, chicken, and exotic pasta dishes in addition to pizza, spaghetti, and lasagne. In addition, some foodservice chains will be developing new concepts that are different from their original concept to take advantage of current trends; for example, fast food chains are opening up full service Mexican restaurants.

Consumers continue to be quality and value conscious. In response to this trend, operators will strive to provide quality food and service at a fair price. Restaurateurs will use fresh ingredients when preparing foods, and they will focus on training their staff to be hospitable.

The focus of foodservice advertising and promotions will be changing in 1985. Marketing and brand differentiation will play larger roles than in past years. Some chains will use advertising to show how their establishments are different from their major competitors. Others will use advertising to show what they do best. Restaurants will continue to use promotions to attract new and repeat business, but the type of promotion is changing. Fewer coupons will be advertised, and more offers which stress value will be visible: all-inclusive meals, early bird specials, two-for-one deals, among others. In addition, premium offers will continue to be popular, especially within the fast food segment. Other promotions will be designed to attract customers to dine at establishments for a specific meal period or on a specific day of the week, when the objective is to build traffic and sales.

Entertainment will continue to be a part of the eating out experience, especially at places that cater to children and teenagers, and feature animated characters and video games. Video pizza operations, the pioneers of this concept, will be looking for new animated characters, new video games, and new computer technologies. However, they plan to turn more of their attention to operational issues, such as improving the quality of the food and service.

Restaurateurs will continue to search for ways to increase sales and profits in 1985. Many full service restaurants will opt for offering take-out service. Gourmet take-out meals will grow increasingly popular

as they directly serve the convenience needs of patrons. Also, operators can initiate take-out service with little or no additional labor and investment expenses. The dual retail concept in which restaurants operate in conjunction with bookstores, bakeries, fish markets, butcher shops, wine shops, and delicatessens will also continue to be popular in 1985. Restaurateurs can use this vehicle to market some of their specialty items, such as breads, salad dressings, and desserts.

As in prior years, foodservice owners and managers will continue to focus on controlling costs and increasing worker productivity. The ever-increasing competition means that pricing will become more important. Operators who can minimize their menu price increases and maintain quality food and quality service will be more successful in maintaining and increasing traffic counts and sales.

All in all, the restaurateur in 1985, will be focusing on meeting patron expectations by providing good food, friendly service, and value for the dollar.

Menu prices are projected to rise 5.3 percent in 1985, versus 1984's lower 4.3 percent gain. This estimate is based on the probability that increases in the cost of food away from home will be lower at the beginning of 1985, but will rise toward the end of the year. Food prices, especially red meat prices, are expected to advance during the second half of the year due to the after-effects of 1984's summer drought. Also, labor and overhead costs will probably rise as the economy improves and consumer demand increases.

Wholesale food prices are expected to advance 4.5 percent, compared with an unusually low rise of 0.8 percent in 1984. Lower supplies of beef and pork in the second half of 1985 will result in higher prices for these commodities, adding to the overall increase in wholesale food costs.

Labor costs are expected to rise moderately in 1985--4.7 percent. An abundant labor supply and moderate inflation should help keep payroll costs down. Other operating costs, including energy, are projected to advance at the same rate as overall inflation--5.0 percent.

These basic cost increases, along with operator concern for improving profit margins, will lead to increased menu prices. If less effort is made to boost margins,menu price increases may be even more moderate in 1985.

The bottom line is that larger advances in menu prices in 1985 will result in slightly lower real sales growth for the industry than in 1984.

Due to an improving economy, NRA projects sales at eating places, which account for 61.6 percent of food service industry sales, will experience significant gains in 1985. The 1985 forecast is heavily influenced by the growing confidence of consumers in the economy and their individual financial situations. Expected gains in consumer spending for all goods and services, increases in disposable income, and a continuing slow decline in the rate of unemployment, are several of the major factors contributing to the optimistic outlook for 1985.

However, the public will probably continue to react strongly to short-term economic news, and as a result, monthly sales may fluctuate widely, just as they have in recent years.

As the economy strengthens, consumers should begin to travel more often and generally allocate more income toward leisure time activities, particularly in dining away from home. Improved business travel and increased attendance at conventions will also aid sales in dining establishments.

Based on these general economic trends, eating place sales are projected to total almost $96.7 billion in 1985, up 9.8 percent over 1984. This growth rate is still below the 12.1 percent annual growth rate recorded during the 1970's, but is above the 9.0 percent annualized rate of gain registered between 1981 and 1984.

Real sales, adjusting for menu price inflation, should rise 4.5 percent in 1985. NRA's forecast for this relatively substantial growth is based on moderate inflation, an improving economy, and the continuing desire of consumers to eat away from home. The 1985 projection for inflation-adjusted sales is slightly below 1984's real growth of 5.1 percent. This is due primarily to 1984's lower menu price increase, which was the result of unusually low food costs. Even so, 1984's real growth is significantly above 1983's reported 2.4 percent gain and 1982's 1.3 percent increase.

One of the premises of the NRA 1985 forecast is that the gain in real eating place sales will approximate the expected growth in

real disposable income: 4.6 percent. This is an improvement over 1984 when real eating place sales growth lagged behind gains in real disposable income. The brighter outlook is due to pent-up demand for dining away from home as well as consumers trading up to higher priced restaurants as their financial situations improve.

Among eating places, limited menu restaurants should continue to maintain their number-one spot in terms of both real and nominal percentage gains. Limited menu restaurants should experience sales of $41.2 billion, a 10.7 percent increase over 1984. This is slightly higher than the 10.5 percent increase posted during 1984. Real sales in this category are projected to rise 5.4 percent in 1985, versus a somewhat stronger 6.2 percent reported one year earlier. Sales for this very important sector of the industry will be affected by several factors:

- New unit construction will continue to be a means of increasing sales and market share for fast food companies.

- Limited menu restaurants will continue to advertise heavily in the electronic media, emphasizing individual concepts and brands.

- Fast food establishments will continue to provide convenience and speedy service--still a major concern for many consumers.

- The upscaling of food and service for particular meal periods at fast food places is a growing trend. The gourmet burger--hamburgers topped with mushrooms, imported cheese, ham, or bacon--is one example.

- The customer mix is changing. Less affluent individuals are and will be returning to fast food establishments because of their improved financial situations. However, more affluent customers are trading up to family and upscale restaurants, which they frequented less often during the recession.

Restaurants, the largest eating place category, should have a good year in 1985 and post sales of almost $50 billion--a 9.2 percent advance. This compares with a smaller 8.8 percent gain in 1984. In real terms, restaurant and lunchroom sales should grow 3.9 percent in 1985, versus a slightly stronger 4.5 percent one year earlier.

The improving economy should substantially boost sales at restaurants and lunchrooms as increasingly optimistic consumers begin to trade up and dine out more often. Customers seem to be concerned with three basic components when eating away from home: excellent service, food quality, and a good price/value relationship. Restaurants that emphasize these factors should experience increased sales and continued growth.

Another factor that may boost foodservice sales is the increasing number of management and culinary school graduates who will contribute innovative and technical ideas. New concepts will give consumers the variety and quality food which they seek.

The overall increase in the foodservice segment would be even better if the outlook for international tourism were brighter for 1985. The relative strength of the dollar may continue to make traveling in the U.S. more expensive for most foreign visitors. The number of Canadian travelers is expected to grow, however, which should add to foodservice sales.

Commercial cafeterias are expected to experience significant growth in 1985 with nominal sales rising 8.4 percent to $2.8 billion. Real sales are expected to jump 3.1 percent. An increase in the

number of units and more aggressive marketing strategies have contributed to the optimistic outlook.

Social caterers are expected to reverse their long period of declining real sales, and break even in 1985. Nominal sales should increase 5.3 percent to $881 million. Although the picture is brightening for this category, hotels and restaurants as well as individuals operating catering services from their homes, continue to provide a great deal of competition.

Ice cream and frozen custard stands should post the second-best performance in the eating place group. Real sales are projected to rise 4.9 percent, while nominal sales should advance 10.2 percent to $1.8 billion in 1985. Public interest in gourmet ice cream continues to be a strong factor in this segment, and has helped boost overall sales.

Food and drink sales at lodging places are predicted to rise 9.3 percent in 1985, totaling almost $8.7 billion. Real sales, adjusted for inflation, are projected to advance 4.0 percent. Although occupancy rates have not advanced substantially, gains in the number of units and plans should help boost overall sales in this segment. Improved commercial air travel, increased convention attendance, more aggressive marketing of weekend packages, and cross-promotional ties with airlines, will also contribute to sales gains in 1985.

Hotel restaurants, the largest component of the lodging place segment, are expected to experience the most rapid growth in this

category--9.4 percent in nominal sales and 4.1 percent in real sales. Motel restaurants should also post a significant increase--9.1 percent--due to growth in vacation and pleasure travel. Real sales for this segment are expected to rise 3.8 percent.

Food and drink sales in the employee feeding category are projected to total $5.3 billion in 1985-- a gain of 7.4 percent over one year earlier. Real sales in this segment are expected to rise 2.2 percent. Food contractor sales at commercial and office buildings should record the strongest advance--8.1 percent--with real sales expected to increase 2.8 percent. Contributing to this increase is the expected 2.6 percent rise in non-manufacturing employment in 1985. Food contractor sales at manufacturing and industrial plants are predicted to rise 7.6 percent, with a 2.3 percent gain in real sales. This is due primarily to a projected 1.8 percent increase in manufacturing employment in 1985.

Institutional foodservice sales in the employee feeding category, which includes industrial and commercial organizations, seagoing ships, and inland waterway vessels, are expected to advance 7.0 percent to $1.9 billion in 1985. Contractors continue having success penetrating this market, especially the office building segment.

Foodservice sales in the educational feeding category are expected to advance 5.7 percent to $8.4 billion in 1985. Real sales are predicted to decline slightly, however-- 1.1 percent--due to almost no enrollment growth in primary and secondary schools; as a matter of fact, this enrollment is forecast to drop 1.1 percent in 1985. Enrollment at

colleges and universities are forecast to record the strongest gains in the educational feeding category in 1985--8.4 percent and 7.9 percent, respectively. Even so, this is somewhat below the 9.7 percent and 9.0 percent annual growth rates recorded during the three-year period, 1981 to 1984.

Food contractor sales at primary and secondary schools are expected to rise 3.8 percent in 1985, with real sales declining 1.5 percent. Sales at primary and secondary schools that operate their own foodservice operations are predicted to rise modestly--2.1 percent. Inflation-adjusted sales, however, are expected to drop 3.2 percent.

Food and drink sales in the transportation feeding category are projected to reach $1.6 billion in 1985, up 12.2 percent from 1984. Real sales will also experience a large gain of 6.9 percent.

In-transit feeding (airlines) by food contractors is expected to show the strongest growth in this category: 12.5 percent, with inflation-adjusted sales rising 7.2 percent. Airline traffic is projected to grow 7.5 percent due to the strengthening economy and continued fare discounts and price wars. These factors, along with improved consumer spending, should help boost foodservice sales in this segment.

Institutional foodservice sales in the transportation feeding category, which includes airlines, passenger/cargo liners, and railroads, are forecast to advance 11.9 percent in 1985, with real sales growth of 6.6 percent. Most of this gain can be attributed to strengthening air traffic, but cruise ships should show strong increases as well.

Railroads may pull the net growth down slightly, as they are not expected to grow quite as rapidly as airlines and cruise ships.

Foodservice sales in the recreational feeding category are forecast to advance 8.9 percent in 1985, with real sales rising 3.6 percent. Total sales for this industry segment will reach $4.7 billion. This relatively strong performance is due to improving consumer confidence in the economy, and increased spending on travel and recreation.

Food and drink sales by food contractors at recreation and sports centers are expected to post the most rapid growth in this category--9.6 percent--with real sales up 4.3 percent. Attendance at national parks is expected to grow in 1985, contributing to some of this gain. Total sales should reach $1.3 billion in this category.

Non-contractor foodservice sales at recreation and sports centers, which include drive-in movies, bowling lanes, and recreation and sports centers, should rise 8.6 percent in 1985. Real sales are expected to increase 3.3 percent.

Clubs and sporting and recreational camps that operate their own foodservice are also expected to post an 8.6 percent gain in nominal sales and a 3.3 percent advance in real sales. A large part of this growth is due to an increased use of clubs. However, there could be a slowdown in this sector if Congress changes the tax laws regarding the deductability of club expenses.

Food and drink sales in the health care feeding category are predicted to reach $12.6 billion in 1985, a 6.4 percent increase over 1984. Real sales are expected to rise 1.5 percent. Food contractor

sales in hospitals and nursing homes are expected to post the largest gain in this category--6.7 percent, with a 1.8 percent advance in real sales. The number of food contractors operating foodservice facilities in nursing homes continues to grow, which should contribute to this relatively strong increase.

Hospitals that operate their own foodservice are the largest component of the health care feeding category and should post $8.5 billion in sales, up 6.3 percent. Inflation-adjusted sales for this segment are expected to show an increase of 1.4 percent. A slowdown in employee growth along with other cost-cutting measures may restrain some of the gains in this category. Nursing homes, operating their own foodservice, are expected to record a 6.5 percent gain in nominal sales and a 1.6 percent increase in real sales.

Sales for retail hosts, which include foodservice operations in drugstores, department stores, and convenience and grocery stores, are expected to advance 8.4 percent in 1985 to reach $4.3 billion. Real sales are predicted to rise 3.1 percent. Traffic is improving at retail stores due to improved consumer confidence, income gains, and pent-up demand. Convenience stores are also experiencing strong growth due primarily to continuing consumer interest in convenience and saving time. Consequently, this sector is providing increased competition for fast food operations.

Food and drink sales by vending and non-store retailers are forecast to reach $3.0 billion in 1985, an 8.1 percent gain. Real sales are

expected to increase 2.8 percent. Increased employment at factories, along with greater distribution of vending machines in non-factory environments, should contribute to stronger sales in this category.

Foodservice sales by mobile caterers are projected to rise 8.2 percent in 1985, with real sales expected to advance 2.9 percent. Food and drink sales in this segment should continue to strengthen as the industrial plant and construction markets improve.

Food and drink sales at community centers are expected to rise 3.8 percent. However, real sales are projected to decline 1.5 percent. This below-average performance can be attributed to reductions in government social programs.

Foodservice sales for the military feeding group should total $844 million in 1985, up 9.0 percent from 1984. Real sales are expected to advance 3.7 percent. Food and drink sales at military exchanges should rise 8.1 percent with real sales projected to increase 2.8 percent. Officers and NCO clubs are doing well and should experience a 9.5 percent nominal gain along with a 4.2 percent advance in real sales. An increase in the military population accounts for the relatively strong performance projected for this category.

1985 will mark the fourth straight year of real sales gains for the foodservice industry, and this trend should continue. Economic forecasts report that the U.S. economy will be healthy throughout most of the remainder of the decade. In fact,many forecasters predict that the nation will experience a slight economic slowdown in 1986 but then

pick up steam and grow at a healthy pace through 1989. Continued low inflation rates and expanded industrial output will fuel the economy.

The foodservice industry is prepared to meet the demands of the future. Foodservice operators have expanded their menus so they rely less on one commodity, and they offer their patrons meals in several different price ranges. In addition, restaurateurs are increasingly emphasizing value and the total dining experience.

Demographic and lifestyle trends are also supportive of industry growth. Those that will be most beneficial to the industry are highlighted below. Research has revealed that individuals with the outlined characteristics tend to eat out frequently and spend more on eating away from home than do other groups. This suggests that the industry will continue to have ample customer base in 1985 and through the remainder of the decade. In addition, a survey conducted each year in September by the Gallup Organization for the National Restaurant Association continues to reveal that the public's appetite for meals away from home is far from satisfied. In fact, if all consumers were able to eat out as often as they would like, customer traffic at our nation's foodservice operations would jump by 30 percent. This bodes well for the industry and those operators who develop ways to capitalize on these trends.[5]

Demographic trends:

- Increasing number of working women, especially working wives and mothers
- Increasing number of single individuals

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[5]Ibid.

- Continued aging of the population
- Smaller households; fewer children
- Increasing household incomes
- Rising level of education

Lifestyle trends:

- Interest in health and nutrition
- Continued demand for more leisure time
- Continued demand for convenience
- Interest in quality and value
- Changing roles of family members

III. REVIEW OF LITERATURE

A 1983 study, Conceptual Framework and Basic Competencies for Vocational Home Economics Education in Texas, Texas Tech University, Home Economics Curriculum Center, was developed for the purposes of 1) outlining the competencies and sub-competencies to be developed in vocational home economics classes in Texas; 2) providing guidance to teachers for local program planning; and 3) serving as a means of communicating the scope and content of vocational home economics education in Texas to others.[1]

Part I of the guide presents competencies for consumer and homemaking education. These competencies cover the following topics: child development; care and guidance; clothing and textiles; family and individual health; family living and parenthood; food and nutrition; home management and consumer education; and housing, home furnishings and equipment. Part II lists competencies for occupational home economics in these areas: child care and guidance; management services; food production, management and services; home and community services; home furnishings and equipment management, production and services; institutional home management and supportive services; and general employability competencies.

The Home Economics Curriculum Center has worked for the past sixteen years to research, develop and disseminate curriculum materials to help teachers provide quality instruction in Vocational Home Economics Education.

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[1] Texas Tech University, Home Economics Curriculum Center. "Conceptual Framework and Basic Competencies for Vocational Home Economics Education in Texas." (Lubbock: Texas, August 1983).

Seven curriculum guides have been developed for use in Consumer and Homemaking Education in Texas. Each guide is closely correlated with the Instructional Framework for Vocational Home Economics Education in Texas. The Framework is used as a basis for developing learning and evaluation experiences for each subject area based on the skills needed by homemakers. Under Food and Nutrition subject area guide, it encourages students to utilize: current nutritional information in meeting personal and family needs, provide guidance for planning meals and snacks, buying food, observing safety and sanitation standards, selecting and using equipment, using recipes, retaining nutritive value of food during preparation and service, understanding food processing and preservation, and relating food and nutrition to career and job opportunities.

Vocational Home Economics Education prepares youths and adults for the occupation of homemaking and for gainful employment in home economic occupations. Consumer and Homemaking Education, which prepares students for the occupation of homemaking, is offered in both a comprehensive sequence course format and in a specialized course format.

A 1976 report from Wisconsin titled, A Competency Based Articulated Model for Secondary and Post-Secondary Schools in Wisconsin, sought to develop a competency-based model for vocational

and technical foodservice programs.[2] The project was aimed at unifying curricula of the various funded secondary and post-secondary foodservice programs. The instructors recognized the need to develop a consistency of preparation within like programs. This would reduce repetition among programs, and would facilitate movement between these two educational levels.

An increasing number of secondary and post-secondary schools, created a demand for a clarification of job progression, and standards for defining each job. The project creators believed that a competency based approach would provide a solution by teaching foodservice students the competencies required for a specific occupational job title. The foodservice industry in Wisconsin was eager to support this venture. The industry which had incurred higher food and labor costs, felt that proper personnel training would reduce these costs.

In a competency based training program, the student is responsible for learning the competencies needed to perform a specific job. A student does not advance by simply remaining in an educational program for a set amount of time (4 years). Instead, the student is evaluated in terms of acquiring the stated skills for a particular job. It was felt that a competency based approach would provide a transition between secondary and post-secondary foodservice programs, provide for better occupational mobility and provide training for job placement at various levels of foodservice employment. This competency based approach was also to serve as a model for all new and existing food-

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[2]Southwest Wisconsin Vocational-Technical Institution, "A Competency-Based Articulated Model for Secondary and Post-Secondary Schools in Wisconsin," (Fennmore: Wisconsin, 1976).

service programs, thus standardizing foodservice education in Wisconsin.

The two agencies involved in the project were: the Department of Public Instruction and the Wisconsin Board of Vocational, Technical and Adult Education. These two agencies created the articulated foodservice model. The objective of their project is as stated:

> "The major objective of this project was to develop a statewide articulated foodservice curriculum model related to realistic employment competencies. This model will be used in the articulation of foodservice programs in secondary and post-secondary vocational and technical schools.[3]

The project listed several sub-objectives which concern defining competencies for both levels of foodservice and education, locating experts in the industry that could assist in developing foodservice programs and creating curriculum planning for both secondary and post-secondary foodservice programs. It also aimed to study and adjust current educational material and use pilot programs to analyze and evaluate educational materials. The project sought to develop a written program and send it throughout secondary and post-secondary vocational and technical schools in Wisconsin. Another objective of the project was to discover criteria that would encourage the handicapped and disadvantaged to enroll in a foodservice training program.

The project is made up of three phases. The procedure involved a study of existing information on developing foodservice programs. This literature would be used to create a trial survey to be given

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[3] Ibid. p. 2

to the Wisconsin Foodservice personnel to discover abilities needed for particular job titles. Prior to distributing this questionnaire, a reviewing committee made alterations to both the job titles and the specified competencies. This committee consisted of both teachers and coordinators of secondary and post-secondary foodservice programs, workers and employees in the industry, the President of the Wisconsin Restaurant Association, representatives of two state educational committees, a district curriculum coordinator, a vocational counselor, a general instructor, and a teacher. This group reviewed the survey and the accompanying directions. The survey was sent to industry to determine required competencies for specified occupational titles. The industry people surveyed were: employed foodservice personnel, representing members of the Wisconsin Restaurant Association, and graduates of 1971 and 1972 secondary and post-secondary foodservice schools in Wisconsin. In May of 1973, the second phase of this project was begun. An orientation workshop for seventeen chosen educators and coordinators in Wisconsin foodservice programs was conducted. This two day workshop sought to discuss the importance of curriculum articulation for foodservice training programs. They also reviewed the results from phase one; the identification of competencies. The final stage of this phase consisted of this two week workshop at which an articulated curriculum model was created for secondary and post-secondary foodservice programs in Wisconsin.

The third phase of the project was an actual field testing of the articulated curriculum model. This phase took place over the academic years of 1973-1974 and 1974-1975, when it was field tested by members of the articulated committee within their existing and new foodservice programs.

The Wisconsin project suggested future phases, pending additional funds. One proposed phase involved a workshop for individualized instruction. It would review existing techniques for individualized instruction and create additional techniques to be used in individualized instruction of the competency-based articulation curriculum. The future phase would also include a two-year research project done by an independent group. This independent agency would rate classroom instruction, field experiences of the program and employment of students.

The Wisconsin report went on to state the philosophies and proposed implementation of secondary home economics programs and post-secondary programs.

The philosophy of vocational educators in the post-secondary program is "to establish a program of instruction at institutions throughout the state which will equip the states' people to find their place in the competitive labor market."[4]

Post-secondary educators prepare the student for both career opportunities and limitations in the foodservice industry. It was

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[4]Ibid, p. 6

believed that a competency-based curriculum would provide the sequence or progression of foodservice programs from secondary to post-secondary schools. It was also believed that such curriculum would illustrate career progression within the foodservice industry.

The Wisconsin project devoted a section of the report to handicapped and disadvantaged students and how the articulated model would be adapted for their needs and use. (The passage of the Vocational Education Act of 1963 allocated federal money to create programs for handicapped and disadvantaged individuals). In 1973, Wisconsin state legislature passed Chapter 89, which further enforced the need to include the disadvantaged and handicapped in vocational programs.

The final part of this paper reveals the formal and results of the Wisconsin project. The project selected thirteen foodservice positions for use in the articulated curriculum model. These thirteen jobs include positions from back of the house, the front of the house and mid-management.

In the Wisconsin project the job competencies relating to each of the thirteen job titles are placed into five different categories. These categorical headings are:

- General Knowledge Competencies
- Food Preparation Competencies
- Serving Competencies
- Work Simplification and Maintenance Competencies
- Management and Supervision Competencies

The thirteen job titles were analyzed within these categories. The project lists a series of tasks under each occupational title, within each of the five categories.

The 1977 Occupational Home Economics Education Series, Fast Food Services Competency Based Teaching Modules was developed through the cooperation of various universities such as the Virginia Polytechnic and State University, Texas Womans University, Iowa State University and East Carolina University.[5] Some of the people instrumental in developing this project were Miss Bertha King, Mr. William Brendt, Dr. Elizabeth Simpson, Dr. Doris Hanson and state supervisors who assisted in obtaining curriculum materials and in the selection of field test sites. In addition to the above, seventy-five teachers and their learners participated in the field tests. The predominant areas where people were selected from were: 1) child development; 2) family relations; 3) homemaker and home-health occupations; 4) clothing and textile occupations; and 5) food and nutrition occupations. All of these persons assisted Phyllis Lowe in this project. Furthermore, the American Home Economics Association supported and contributed towards this project.

The objectives of this project are rather diverse in nature, however, some of the salient features include an overview of home economic education occupations, evaluation of materials, field test designs, directions to teachers, competency lists, definitions for module components and a package for fast foodservice learners.

The focal point of home economic occupations is jobs which relate to the home and family. Technical skills and abilities to manage multiple

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[5]American Home Economics Association. "Occupational Home Economics Education Series. Fast Food Services Competency Based Teaching Modules." (Washington:D.C., 1977).

resources are then transferred to related occupations in business, industry, institutions and government agencies. This series of modules will provide the training needed to develop the competencies and skills for delivery of services needed by society.

Since this project is broken down into modules, each module focuses on the development of learners for paid employment through a sequence of pre-assessments, objectives, competencies and teaching strategies which utilize multi-sensory experiences, resources and post-assessment. Each module addresses cognitive, affective and psychomotor learning pertinent to specific job performance.

The layout of the entire project is such that the competency based series are in module formation and each contains assessment instruments, concepts, strategies, resources and student reference sheets for each of the following occupational titles:

- care and independent living services for the aging
- catering services
- clothing alterations
- consumer services
- fabrics and textiles merchandising
- fast food services
- furnishings and housing maintenance services
- housing management services
- securing employment
- window treatment services

The premise of the project is that an urgent need exists for trained workers in the human services industry at all levels. Consequently, failure to recognize that definite skills are needed, regardless of whether home-related tasks are performed inside or outside the home,

has relegated many of these services to dead-end jobs. With this in mind the American Home Economics Association recognized both the needs of the individuals employed in home related service jobs and those of society and sought funds to develop a system for training and providing upwardly mobile opportunities for workers in the human service occupations.

In June of 1974 the United States Office of Education, Bureau of Occupational and Adult Education awarded the American Home Economics Association a 30-month contract to develop and field test non-graded, competency based teaching modules in the areas of occupational home economics. Prior to this, occupational curriculum development in home economics had primarily consisted of scattered and individualized efforts.

The contract for the project divided the work into two phases. Phase I of the project involved a state-of-the-art study, which consisted of the development of a computer-generated annotated bibliography of curricula available in occupational home economics. A study was also completed concerning the basis used for making curriculum decisions for home economics teachers, state and local supervisors and state directors of vocational education.

Phase II involved the development, field testing and revision of non-graded, competency based teaching modules designed to meet the identified curricular needs which in turn help to meet social needs.

The rationale behind this study as far as fast food is concerned is that fast food was, at the time of publication in 1977, and is still

now, one of the most rapidly expanding occupational areas. The rapid growth and volume of business conducted by the fast food industry has resulted in an increased demand for fast food workers. This demand for competent workers is expected to continue to increase beyond the year 1985 and into the next decade.

The general basis for constructing this study was that the similarity of the functions and operations of fast food service to other foodservice gave trained personnel the potential of either working in a variety of fast food establishments or transferring to other related occupations. Fast food employment is also especially suited to people who have a genuine interest in working on a personal basis with people.

Another reason taken into account in this study is that fast food service is too often thought of as employment held primarily by untrained personnel.

Experience, skill, education, quality of performance and ambition all add to consideration for advancement in this field.

The objectives of this study maintained that in order for people to become productive members of society, many individuals who had little or no training in fast food service would need to be given more comprehensive job training and would need to be equipped with more flexible job competencies. This emphasis on specialized training and the demand for a marketable skill upon completion of secondary level education suggested that a program which offered both education and job related training would be beneficial not only to potential fast food service workers,

but also to fast food management. Furthermore, the project maintained that developed curricular and occupational home economic programs can serve a valuable purpose in orienting learners to fast food employment and the world of work.

In research of this project, a job description emerges and it becomes clear that the fast food industry comprised of workers who hold numerous job titles, the most frequently used job titles include: "bus attendants," "counter workers", "servers," "assemblers," "cook's helper," "cook," "assistant manager," "manager," and some managerial personnel associated with franchises and corporations.

This project has gone into the aspects of hygiene and sanitation, which are very important areas to be considered in fast food service. The types of aspects that the project has delved into are: a primer of sanitation terms, personal hygiene requirements for foodservice workers and also safety in terms of injury and first aid. An emphasis has been placed on the ability to follow directions/procedures and to do things as instructed. Moreover, various training modules in the fast food service area have been designed in the form of questionnaire tests which relate to health, safety and sanitation. The formulators of this project were also concerned with delivering directions to the teachers of these programs. The project lays out definitions for module components to be used with the modules concerned. The project staff agreed that a competency statement is broad in scope and includes the skills, knowledge and attitudes essential to perform a job or task.

The project formulators went on to determine that learners will be able to demonstrate acquired skills as a result of their exposure to a program of instruction. The overall strategy is to create learning situations and experiences which expose the learner to the content to be learned and allow the learner to demonstrate progress toward the attainment of the objective.

Most modules present a competency based curriculum for preparing skilled persons for entry level fast food employment. This project also developed a "Securing Employment" module, which was designed to supplement the other materials. The "Securing Employment" module contains those competencies needed to find employment, maintain effective interpersonal relations on the job and other employment facilitating competencies.

The fast food service modules developed in this project were intended to meet a recognized need in the area of occupational home economics curricula. The project formulators also produced an "Assessment" module. This was done because the formulators believed that evaluation is essential in diagnosing learner's need and determining the effectiveness of a program. Included in the assessment section are pre/post cognitive and performance instruments. The overall result of assessing the effectiveness of the teaching methods used was conducted by evaluating field testing results, and these indicated that the learners in fast food service did achieve competency after completing the modules.

The modules were found to be useful and effective for a wide range of learners and in a variety of settings. This projects creators hoped that these occupational home economic education series modules will substantially contribute to the development of workers for paid employment and will enhance the multiple roles of all workers.

The 1983 study entitled Competency Based Curriculum for Prevocational Exploration Consumer and Homemaking developed a competency based curriculum for prevocational exploration hospitality.[6] This study was performed by the Huntington West Virginia Department of Occupational, Adult and Safety Education. It consists of 15 teacher-developed learning packets that have been developed for use by teachers and students during the exploration of various hospitality occupations. This project is a result of cooperative efforts of the Bureau of Vocational Technical and Adult Education and Marshall University. The materials were developed by eight teachers representing six counties in West Virginia and two Prevocational Exploration staff members from the Department of Occupational, Adult and Safety Education at Marshall University.

The individual sections of the curriculum deal with various custodial, customer service, foodservice, hotel and lodging and information service occupations. Included in the hospitality occupations are executive housekeeper, gardener, house cleaner, checkroom attendant, parking-lot-attendant, cashier, cook, salad maker, waiter, and waitress, hotel

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[6]Marshall University, West Virginia State Vocational Curriculum Lab., "Competency Based Curriculum for PRevocational Exploration Consumer and Homemaking." (Cedar Lakes, March 1983).

clerk, hotel manager, guide, host and hostess, information clerk and travel agency manager.

Each lesson contains a description of occupational families in the specific occupational cluster addressed in the section, representative job titles, an occupational task statement and an occupational competency statement. The curriculum contains a list of resources and materials needed to implement the section, learning objectives, learning activities and evaluation procedures.

A 1982 document titled Hospitality Service: Hotel and Restaurant Management and Culinary Arts Curriculum Guide for Joliet Junior College, Illinois was reviewed.[7] Sponsored by Illinois State Board of Education, Springfield, and Department of Adult, Vocational and Technical Education.

This publication contains competency based materials for hotel/restaurant management and culinary arts. The materials are designed for students to learn from a work station concept by rotating through a variety of real work settings in a hotel/restaurant environment. In addition, the materials indicate whether or not the students have developed competencies determined to be necessary to succeed in a variety of tasks within the hospitality industry.

The curriculum materials are divided into two separate sections. The first section of the guide pertains to tasks performed within the field of hotel/restaurant management, while the second section encompasses the culinary arts. Duty sheets contain the name of the duty, the task under which it is classified, objectives, learning experiences, activities, instructional materials, and an evaluation. A student's checklist

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[7] Illinois State Board of Education, Department of Adult Vocational and Technical Education. "Hospitality Service:Hotel and Restaurant Management and Culinary ARts Curriculum Guide." (Illinois, 1982).

is provided for each duty. Work stations contained in the culinary arts section are safety, sanitation, food preparation, baking and service and dining. Duty sheets list the name of the duty, the task under which it is classified, performance objectives, learning activities, references and a rating sheet for checking student competence.

Joliet Junior College, under contract with Illinois State Board of Education, Adult Vocational Technical Education, developed a unique set of competency based materials for hotel/restaurant management and culinary arts.

The materials are unique in that students learn from a work station concept by rotating through a variety of real work settings in a hotel/restaurant environment. In addition, the materials indicate whether or not the students have developed competencies determined to be necessary to succeed in a variety of tasks within the hospitality industry. A further feature for Joliet Junior College is the operation of the Renaissance Center (a hotel/restaurant/banquet complex) which affords the students first-hand opportunities to operate practical facilities while learning the skills.

The curriculum guide may be used by a classroom instructor to teach the skill in the educational facilities or teach the skill in a classroom/laboratory approach and then place the students in an off-campus situation for the first-hand practical skills.

This document is divided into two parts:

Part I: Introduction to Hotel/Restaurant Management

An organizational chart depicts a model which may be used

to illustrate a typical reporting structure within a hotel. The student's checklist insures that each student spends time performing tasks in various segments of hotel and restaurant management.

Through the combined efforts of instructors and hospitality industry experts, the student should develop work station competencies suitable for entry and midmanagement level positions in the hospitality field.

Part II: Introduction to Culinary Arts

The materials developed use the work station concept as part of competency based instruction.

Through a system of instructor demonstrations, testing, and practical laboratory experience, the students would develop competencies suitable for entry level position in food production. A rotation schedule ensures that the individual student is trained in all phases of the operation.

In 1981 a Competency Based Instructor's Guide Including Student Modules for Food Management, Production and Services was developed by the Tennessee State Department of Education, Nashville Division of Vocational-Technical Education.

> "This instructor's guide is designed to accompany a set of 52 competency-based modules dealing with food management, production, and service. It is part of an instructional package that is intended to be taught in secondary and postsecondary vocational programs in Tennessee."[8]

This comprehensive curriculum guide is the product of a contract

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[8]Tennessee State Department of Education, "A Competency Based Instructor's Guide Including Student Module for Food Management, Production and Services." (Knoxville: Tennessee University,1981).

between the Tennessee State Department, Division of Vocational Education and the Department of Vocational Technical Education of the University of Tennessee, Knoxville. The purpose of the award was to develop instructional materials for an articulated program of Food Management, Production and Services. Almost all of the foodservice teachers within project began September 1979 and ended June 1981.

A review team monitored, reviewed and approved the plans, competencies, tasks and progress of the project - composed of individuals representing various factions of business, industry and education.

A Domain committee conducted a state-of-the-art survey, developed a job structure for the occupational area of foodservices (from lowest to highest job titles) and identified competencies needed for initial employment as well as for tasks for various job descriptions. Although not presented in the final document, this matrix of jobs and tasks was the basis for making decisions about the competencies and tasks included in the curriculum.

Foodservice teachers met for a two day workshop to provide input regarding the development of curriculum materials and to verify the task lists compiled by the Domain Committee. This group also made initial decisions on the level of the tasks, which later was verified/revised by the review team.

A writing team of ten foodservice teachers met together for a week of training, received writing assignments and spent much of the

summer of 1980 writing modules. They returned to meet together and with the review team about mid-way in the writing period.

Field test teachers consisted of a total of fifty-nine classroom teachers and their foodservice students used the materials and submitted detailed evaluations of each module for purposes of revisions.

The set of fifty-two competency based modules was developed for use in secondary and postsecondary programs and in most instances a two-year course of study. Most modules were written for a competency statement and specified job tasks but some modules are to provide students with related necessary skills and information which do not emerge as job skills. Each competency statement contains several tasks which are done on the job. Those tasks included within the modules are the ones agreed upon by the foodservice teachers and project review team. Tasks were further identified by level to aid the teacher in guiding student instruction. The task level designation and the meaning is as follows:

1. Basic
2. Special
3. Advanced

The modules are written to be self-contained. However, the content is minimal and the teacher is encouraged to supplement with additional readings, activities, etc., according to the interests and abilities of the student. The module can be used with one student individually. If group instruction is preferred, suggestions are made to facilitate that end.

A cognitive pre-test and post-test has been developed for each module. Modules also require a performance "final checkout," which corresponds to the specific student performance at the beginning of the module.

Upon completion of the module and post-test, the student is ready for the teacher to administer the final checkout activity. Students not meeting the specified criteria for the performance will need to have further learning experiences planned by the teacher.

The student profile sheet is a total list of the tasks in this curriculum. One is to be kept as a record for each student with the date of the performance evaluation and degree of mastery recorded.

The outcome of learning can be categorized into five human capabilities: intellectual skills, cognitive strategies, verbal information, motor skills, and attitudes. One of these five human capabilities is that of intellectual skills. These intellectual skills are of five types or levels arranged in a hierarchy from high to low. Each level builds upon the one(s) below it. Arranging intellectual skill objectives into a hierarchy shows the prerequisite relationships and gives the teacher a map for instruction. The hierarchy of intellectual skill is as follows:

1. States
2. Identifies
3. Classifies
4. Demonstrates
5. Generates
6. Chooses

IV. OVERVIEW OF FOODSERVICE CURRICULUM IN CONNECTICUT

Twenty-three foodservice teachers from both comprehensive high schools and vocational programs from throughout the state were personally interviewed. The purpose was to obtain information in regard to the consistency of foodservice curriculums. In order to provide confidentiality and anonymity various programs will be identified with an alphabet designation.

High School "A" curriculum has been designed so that every student interested in a foodservice career can benefit. The curriculum is thorough and stimulating to all students. The enrolled students have various cultural backgrounds and future goals (some are college bound while others seek to join the work force upon graduation).

The program is divided into Foodservice I and Foodservice II.

In Foodservice I, the students are able to prepare:

a. The two basic stocks: beef and chicken

b. Soups

c. Sauces and gravies

d. Meats, poultry, fish and shellfish (the preparation and cooking of the listed food items).

1. Students learn to differentiate among the various methods dry and moist meat cooking, (roasting, pan frying, braising, steaming)

2. Analyze the new concepts of convenience types of food in the frozen food line.

3. Apply fundamental learning experiences to new equipment and techniques of cooking meats, poultry, fish and

4. Present sandwiches, with eye-appeal and neatness.

e. Students prepare vegetables: frozen, fresh and canned

f. Salads:

Lettuce differentiation (bibb, iceberg, chickery, escarole)

Salad types: meat, fruit, vegetable and lettuce variety

g. Students bake breads, rolls, muffins, (plain and fruited), and bake desserts; cakes, turnovers and other hot desserts.

Foodservice II is offered to seniors who successfully completed Foodservice I in their junior year. Emphasis is given to management skills, marketing, menu planning and total operation of a foodservice operation from management's point of view. International cooking, advanced baking and job placement are also offered in addition to the basic skills.

Foodservice II students learn about equipment, weights and measures, kitchen safety and sanitation, identification of products and breakfast cookery.

Objectives Include:

1. Reinforcement of safe work habits and skills from Foodservice I

2. Have students aware of management's position
3. Creation of their own foodservice operation on paper
4. The correct writing of menu - including all courses and coordination of items

Students learn about the following aspects of foodservice; employment, introduction to management and facilities planning.

Foodservice II students are helped into part-time jobs through the coordination of the program.

The Foodservice instructor at School "B" believes in giving the students a practical training program which will aid them in getting employment upon graduation. The students attending the school are all handicapped and/or mentally retarded. Therefore, the training is geared toward each individual students needs. According to the instructor, 70 percent of the students enrolled in the foodservice program adn that finish the program go into foodservice. The school services ten towns.

Classes involve Group #1 beginning at 8:30am and class periods last approximately 50 minutes. The first group begins basic prep work and cooks a lunch for the day and the fifth group serves the meal. The students feed 100 people per day. The menu which servesas the curriculum for the coursework are created and distributed by the Board of Education in the town. The menus are printed in advance and sent to the schools. The menu is a 30 day menu. Students also do catering jobs occasionally.

Students in the foodservice program use a time clock. This is utilized to instill a sense of responsibility and promptness. The students prepare a meal lunch every day of the work week for 100 people. There are no textbooks utilized.

Depending upon the predetermined menu, students may be exposed to any/all of the following: meat, bread, potato, vegetables, desserts, sauce, pasta, pizza, soup, salad, sandwiches, condiments, milk, ice cream, peeler, slicer, buffalo chopper, sheet pans, cutting boards, fryolator, mixer, steamer, ovens, microwave oven, shelves, garbage cans, sweeping, dishroom work.

The foodservice program spans a 5-year time period. Each class group starts with the first year of instruction involving training on dishwashing machines and pot washing. After the first year students progress toward more complicated instruction. Second year students may be involved in prep work (i.e., peeling vegetables). Third year students may put recipes together by utilizing standardized recipe cards. Fourth year students learn how to cook, use kitchen equipment and fifth year students serve the food off of the line and learn how to use the cash register.

Students progress is based upon attempting skills, practicing skills and mastering skills. There is a list of fifty tasks on a bulletin board in the kitchen area. These tasks are assigned on a daily basis in conjunction with the daily menu planned.

The instructor at School "C", strongly believes in providing practical experience as well as textbook theory. There are three textbooks used within this foodservice program, "Food Production Principles," John Wiley & Sons, NJ 1983, "Marriott," Dessert Book Co., NY 1977, "Quantity Food Production," Kotschevar, L. 1974. The foodservice program at School "C" is open to juniors and seniors only. It is a two year program consisting of approximately 560 hours per year.

During the spring term the program includes a restaurant at the school that the students run. The restaurant is open to the public and serves a variety of menu items. Students get experience cooking and serving/supervising the restaurant on a rotating morning breakfast and lunch restaurant.

The breakfast/lunch restaurants are a year round part of the foodservice training program. The students get to cook, serve, handle cash and supervise the breakfast facility. In addition to classroom work, students do catering after school hours and enter culinary competitions during the year. Students also have the option of joining several foodservice related groups both statewide and nationally and many students are very active within these organizations.

Another part of the focdservice education program involves seminar speakers (i.e., on first aid, etc.) and field trips to such places as

the New York City Hotel Show, Culinary Institute and Johnson and Wales. The junior year foodservice student learns the basic terminology; waitressing, salad prep, dessert prep, breakfast and lunch preparation and service, safety and sanitation. In addition, juniors are shown training films dealing with proper food preparation. Students also learn about different meats, poultry, fish and vegetables.

Senior year foodservice students explore the aspects of staffing, planning, inventory control, purchasing, baking and dining room management. Seniors also build upon the previously learned basics toward more advanced techniques in preparation and service.

Students in the foodservice program often work part-time in the industry. Periodic evaluations are provided by the employer to the instructor monitoring the student's progress.

There are three different classes everyday. Each class meets for ninety minutes. The main objective of the program is to provide the foodservice student with a solid foundation of skill and knowledge to build upon with future work experience and/or education.

The foodservice program at School "D" is divided into the first year foodservice academic program and the second year foodservice academic program.

First year students learn cleaning duties such as removing soil from cooking equipment, cleaning tools, china, glass and utensils. Sanitation duties include removing bacteria from cooking equipment, breaking down the dishwashing machine, and learning how to dry, sort and store all equipment.

At the pre-preparation station, students learn to measure ingredients, wash, care and peel vegetables, use proper storage requirements for different food types and garnish using fruits and vegetables.

At the baking station, students learn to follow a recipe correctly, correct use of multi-mixer, prepare cookies, muffins and begin cake decorating.

The breakfast station, students prepare scrambled, fried and poached eggs. Students prepare omelets, hotcakes and french toast.

At the sandwich/salad bar, students study the different parts of a sandwich. They learn the storage requirements for salad ingredients, and prepare both hot and cold sandwiches. Students make salad dressings from scratch.

They also utilize a grill station, a broiler station and a fryer station.

All aspects of service such as: American service style, how to prepare a table correctly, take orders for meals properly and maintain a service station.

The second-year foodservice program includes course work in advanced baking, appetizers, stocks, soups, sauces, fruits, vegetables, meats, poultry and seafood. In addition, the students participate in a semi-co-op program where they work 240 hours in a six month period. Students attend lectures and field trips given by chefs, or managers at local restaurants.

The Food Trade Courses at School "E" is designed for students at the secondary level. It is intended to prepare students for entry level position in the hotel and restaurant industry. It provides a

three-year course which leads to a high school diploma and also available to high school graduates in a two-year program.

Throughout the course, actual work experience is provided in the daily preparation and serving of meals in the student cafeteria with quality food preparation and planning. The course also includes banquet and catering service accepting limited requests from the public. The menus that have been developed are found in the actual foodservice operations. As a result the student gains in experience, understanding, and skill for prospective employment. The lunch room service is for faculty members and limited public.

Theory and demonstration was presented in close relationship with the actual shop experiences. Chefs are welcome to give demonstrations and share their culinary knowledge. They provide the students with satisfying creativity in the development of trade skills. The theory class gives the students the necessary instruction by demonstration, discussions and assignments.

Students experience basic techniques in the kitchen under the supervision of the instructor while working. The total program is planned to raise the level of students craftsmanship through the three years of training.

Graduates are normally employed at a lower entry level as a dish-washer or at the upper level as preparation person.

The Food Trades program provides basic instruction and learning experiences in the three major areas.

1. The daily student lunch program provides experiences in quantity food preparation based on standard school menus and menus related to industrial catering.

Planning and preparing menus on a weekly basis is an important part of this experience.

2. The daily lunch program provides a wide range of experience to students. This program is an entirely separate operation in the kitchen with menus prepared by advanced students. Instruction in this area emphasizes not only recipes and proper food preparation, but also ordering, inventory control and dining room management.

3. A banquet and catering service allows for public banquets for service groups, conferences, educational organizations, but limited to one or two affairs monthly.

   This service may be a dinner menu or a buffet to give students a variety of experiences. Practice in ice carvings and table decorations is provided for advanced students. As a part of banquet service, catering opportunities are included for service outside the regular school program.

The objective of the foodservice program in School "F" is to provide students in the professional foodservice field with a basic and practical "hands-on" experience at school. The program of study at this school aims at developing the students interest in furthering training and education, and advancement. Students learn good work habits and gain a sense of responsibility toward a job. Another objective of the course

is to develop an attitude of cooperation and respect regarding fellow workers, dedicated supervisors and employers. Students gain an understanding and appreciation of the importance of safety, personal hygiene and sanitation, and develop an attitude of respect for, and knowledge of, the use and care of material and equipment. Students learn to have an appreciation of the status and dignity attainable in the food-service field and a constant striving for excellence and effort to help raise gastronomic standards.

Considerable emphasis is placed on personal hygiene and sanitation as part of the program and to be of prime importance in today's food-service industry.

Students begin practicing knife handling basic procedures, and techniques using various knives.

The pantry course forms a considerable part of the course and includes preparation of sandwiches, salads, beverages and desserts. Also included are studies involving: formulas, recipes, storeroom procedures, culinary terms, weight and measures, etc. Students prepare simple snack items and foods for brunch.

Students learned basics of table service and proper table setting so that proper pleasant dining atmosphere may be provided. They learned to use the cash register and develop their awareness of cost and cost control in the preparation of food products and the principles of food and labor costs today.

Students gain basic knowledge of bakery products used in baking and how the characteristics of certain products lend to their use in baking. This is basic and is intended only to fill out the general background of the student and to expose him to as much as general knowledge as possible to serve as a foundation for further training. It is important that students be aware of the different kinds of flour and their properties, the action of yeast and other products. Equipment used in baking is covered at this time.

The program seeks to provide students with the foundation for preparation of soups and sauces. The objective is for the student to gain basic knowledge of stocks, their purpose, how they may be derived, how they may be used and how other prepared products may be used as substitutes or to implement flavor of stocks.

School "G" has two courses in its foodservice program: Food Service and Management I and Food Service and Management II.

Food Service Management I is a course for 11th and 12th graders who are interested in the preparation of food and who plan a career in restaurant or foodservice institutions. Students investigate and apply the principles and methods used in quantity food planning, purchasing, and production using equipment similar to restaurants and large feeding institutions. Students are expected to participate in the evening program of the "Cafe" to expose them to actual restaurant work.

Food Service and Management II is a continuation of Food Service Management I. Students investigate restaurant management as it applies to purchasing, receiving, storage, inventory and food costs. Students learn detailed culinary food preparation techniques. Upon completion

students are qualified for entry level jobs in the foodservice industry. Students are expected to participate in the evening program of the "Cafe" to expose them to actual restaurant work.

There are no prerequisites for enrolling in the Food Service and Management I course, but a student must pass this program with a "C" or better and complete the six weeks in the dinner program to take the sequential course, Food Service and Management II.

The foodservice instructor will accept students based upon the following criteria:

1. The results of counseling indicate the student can profit from participation in the program.
2. The students interest, ability and career goals are geared toward the foodservice industry.
3. The student is in the 11th or 12th grade. The student's schedule is the equivalent of a double period per day, five days per week for the entire school year. This is a total of approximately 210 hours per year.

The foodservice courses are taught in the foodservice kitchen. The laboratory kitchen dimensions are 28' x 25' and houses all the foodservice equipment and serving supplies used during the course of the year.

The room was designed in conjunction with the state guidelines and program objectives.

The adjoining room serves two functions: in the first two semesters the room is a resource area for students. When the students have completed the units necessary to begin serving food to the customer, the room is converted into a dining area. The resource areas are covered by large decorative screens and the student work areas are converted into dining room tables.

School "H", Food Service I, covers topics as Food Service Industry Workers, Personnel Qualifications required, Safety in Food Service Operations, Sanitation, Nutrition and Menu Strategy.

In the cold food station/short order cooking section, the student learns the principle of sandwich preparation and service. Baking skills are taught at the bake station where students learn the principles of yeast breads, quick breads, pasteries, and cookies. Breakfast cookery develops an understanding of the technique of breakfast cookery.

Students learn the principles of preparing stocks, soup, sauces, the principles of customer service, the basic principles and factors relating to good salads and the relation to the menu. The course concludes by covering the basic procedures for planning, preparing and serving a lunch for several people.

Food Service II begins with a review of sanitation, health and safety regulations. The following section covers food and equipment inventories so the student understands food merchandising and the importance of controlling costs.

The principles and techniques of food production covers the effective

use of time, energy and materials in food production. A fry-broiler station teaches the basic principles of preparing and serving deep-fried and sauteed foods. Students learn dry and moist methods of meat cookery. They also gain background knowledge of meat cuts and their uses. A section of the course teaches the student the purpose of convenience foods in the industry and the principles of microwave cookery. This course concludes with a section on American and ethnic foods, here the student examines the basic foods of various cuisines by studying the origins and present day popularity.

School "I" has had an operational foodservice program for one year and has a total of nine pupils enrolled. The average age of the pupil is sixteen and the foodservice program is divided into two distinct areas: preparation and cooking and foodservice.

Foodservice emphasizes how to serve customers in a restaurant situation, utilizing place settings and the types of service that are associated with various types of cuisine.

The present restaurant at School "I" is new, where the pupils help in making tablecloths and napkins. It was originally a classroom that has been converted into a restaurant. It has the capacity to accommodate thirty customers per sitting.

Throughout the program students learn how to read and understand a recipe, the proper measuring equipment and knowledge of ingredients.

Students learn to use and maintain foodservice equipment and plan menus according to food availability.

Students learn to "cost" recipes to price them for sale at the appropriate mark-up, adjust recipes for fewer people and supervise kitchen staff.

School "J" has divided its foodservice program into two areas: an introductory course, called Food Service I and a more practical oriented course called Food Service II.

Food Service I consists primarily of preparation and clean up functions. Topics such as inventory, sanitation, safety, sauces, salads, and basic food preparation are taught at this level.

Food Service II consists of advanced cooking, complicated sauces, sanitation, health and safety, customer contact (such as waiting, cashiering and taking orders) and a more involved instruction in cooking than that found in the first course.

There are 37 students pursuing this course whose average age is 16. The instructor teaches three classes a week (of 3 double periods which are 1½ hours in duration) and one single period of 45 minutes, in which the theoretical concepts of cooking are explained to the students.

This course is 3-years old at this school and there is good support for this course from the faculty. Two classrooms have been converted into a restaurant which seats 34 customers at one sitting and the kitchen is a converted classroom as well.

The students learn how to prepare salads and sandwiches, the proper use of knives, sanitation requirements, personal hygiene, and how to follow and modify recipes.

Students work with grill equipment and prepare sandwiches, breakfast items; such as French toast, pancakes, and egg dishes. The course covers terminology such as "parboil," "sift," "knead," and "proofing." Students bake bread, cookies, piecrust, and learn how to use yeast and cake yeast. The course covers the five main cooking procedures of dry heat, moist heat, extraction, combination and deep frying.

School "K" offers a foodservice program. Students taking this program are taught foodservice courses for 45 minutes every school day. The program has been established for the last 12 years and the curriculum guides have been updated 3 times.

The kithchen is equipped with the basic equipment and utensils to work individually at the beginning of the course as well as quantity cooking.

Upon completion the students will seek employment in the industry at the lower management level.

The foodservice program is divided into two sections: in Food Service I the students are taught food preparation techniques for the breakfast and luncheon menu. The good work habits, attitudes and skills needed by the foodservice entry level employee are developed. The students will be expected to participate in some after school functions. The course is open to 10th and 11th grade students.

The Food Service II course emphasizes the laboratory work and includes preparation of foods for the dinner menu. Various types of dinner table service are used. This course is open to 11th and 12th grade students. They are encouraged to work part-time in the industry. The industry normally will contact the teachers in charge and the teachers will help choose the students for the work she/he thinks best suits the student.

School "L" offers foodservice programs which prepares high school students for entering employment in food occupations.

The program focuses upon the development of students for gainful employment through a course sequence of concepts and generalization, performance, objectives, learning activities, and criterion-referenced evaluation. The emphasis is upon the development of occupational competencies. The assumption is that students will be able to perform the listed competencies in an actual work setting if they can demonstrate satisfactory achievement of instructional objectives on the basis of criterion-referenced evaluation.

Unit I of School "L" begins with an overview of foodservice occupations. The objectives is to list personal qualities which enhance sucdess of workers in foodservice occupations. This involves explaining the many types of foodservice establishments that exist, and the employment opportunities available. A course objective is to teach the students that successful foodservice workers possess such qualities as; good health, dependability and initiative. Students learn to interpret specific foodservice job descriptions and evaluate career possibilities in foodservice.

In Unit II the students study food contamination and food-borne illnesses. They learn the ways foods can be contaminated and diseases caused by improper handling of food. They learn to differentiate between desirable and undesirable personal hygiene practices. This course covers optimum conditions for growth of molds, bacteria, yeast and viruses and the sanitary handling of food to prevent contamination.

Unit III instructs the students on the procedure for dishwashing and storage. Students also learn about safety and the correct handling of tools and equipment. OSHA regulations and good safety practices are covered.

Unit IV covers the care and use of small equipment, and Unit V covers the care and use of large equipment.

Unit VI concerns organizing and planning so students learn work simplification and work scheduling techniques.

Other concepts covered in this School's Foodservice program includes: menu planning, ordering and receiving, storage of food and supplies. Food preparation topics are terminology, techniques of portioning foods, and convenience foods. Food preparation activities includes: measuring liquid and dry ingredients, increasing a recipe and the interpretation of recipe terms and direction.

Another unit of the foodservice course is dedicated to meal and table service, where the student learns the differences among various types of table service. They learn the proper placement of flatware, glasses and china. They also learn how to greet guests, prepare and serve cocktails, hors d'oeuvres and canapes.

The foodservice program also instructs the students in various types and preparation methods of: soups, consommes, salads and salad dressings, fruits, vegetables, cheese and egg cookery and sandwiches.

This researcher feels that the twelve schools discussed are somewhat consistent in their overall curriculum. Eventhough there are forty-two comprehensive and vocational foodservice programs in Connecticut only twenty-three provided personal interviews and support documents in regard to the programs curriculum. If a school did not provide both of these essential criteria, the researcher felt there was no base for an unbiased critique.

V. RESEARCH METHODOLOGY

Construction of the Research Instrument

The review of literature produced no instruments used in past studies to measure the attitudes of food service professionals toward task competencies.

The questionnaire was comprised of two basic parts: the first being a proficiency variable; the second a frequency variable. The tasks for the instrument were identified through personal interviews with twenty-three (23) secondary and vocational foodservice teachers, and twenty-seven (27) supervisors and management personnel of foodservice and bakery related establishments.

These statements were categorized by subject matter pertaining to the six occupational titles; reviewed for redundancy and ambiguity, for relative simplicity, for ease of understanding and for length.

The instrument was submitted to the State Food Service Advisory Panel composed of foodservice operational and education experts to be evaluated for validity, redundancy, ambiguity and measurement possibilities. Their collective judgment provided a more knowledgeable base and tended to cancel any prejudices and biases of the researcher.

Revisions, suggestions, recommendations and criticisms resulted in a culling of the original statements and a revision of the population group.

The instrument was summative in design. Each item within the final instrument has a five step scale ranging from "complete proficiency" to "no proficiency".

Five scale steps were chosen for the following reasons: there is always an advantage in using more rather than fewer steps and Nunnally supports this by the following:

> This is demonstrated by the numerous studies showing that the reliability of individual rating scales is a monotonically increasing function of the number of steps....As the number of scale steps is increased from 2 up through 20, the increase in reliability is very rapid at first. It tends to level off at about 7, and after 11 steps, there is little gain in reliability from increasing the number of steps.[1]
>
> .....the use of a 'neutral' step introduces response styles. Some subjects tend to use the 'neutral' step more than others, and individual differences in that regard might not relate highly to the attitude in question.[2]

A Pilot Study

A pilot study was conducted to pretest the instrument that was to be used in this research effort. The preliminary drafts of both the cover letter to be mailed and the instrument itself were sent to a sample of fifty (50) foodservice/bakery supervisors and managers throughout the State of Connecticut.

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[1] Jum C. Nunnally, Psychometric Theory (New York: McGraw-Hill Book Co., 1967), p. 521.

[2] Ibid, p. 522

Recipients of the questionnaire were members of the National Restaurant Association and Bakers Association and were chosen by use of a random number table. A stamped, self-addressed envelope and a cover letter were included with the questionnaire.

Response to the pilot survey provided twenty-eight (28) returns from fifty questionnaires sent to foodservice managers/bakers. All of these returns were usable. The data were keypunched on cards and a print-out was obtained which provided the various statistical measures needed to determine the adequacy of the instrument.

On the basis of correlations of the individual statement scores with the total instrument scores, thirty-four (34) of the statements were found to be of marginal value for inclusion in the final instrument, and were therefore dropped from further consideration.

The reliability and internal consistency of the pilot test instrument was determined with an item analysis utilizing the Kuder-Richardson 20 and the Spearman-Brown Formulas.

In order for statements to be retained, they were required to meet the following criteria: (1) they were required to correlate with the overall questionnaire with a coefficient of +.56 or higher and (2) they must have correlated with at least four other statements which were ultimately retained, and do so with a coefficient of +.56 or higher.

Using the Kuder-Richardson 20 formula, a reliability coefficient of .97 was obtained. The Spearman-Brown formula yielded a correlation coefficient of .98.

Follow-up discussions were held with a number of participants to obtain their opinions of the clarity of the instructions and the overall format and wording of the pilot study questionnaire. After the writer secured constructive criticism of both the letter and the instrument itself from these individuals (who were similar to the respondents who would later receive the final questionnaire), several changes in wording, order, and layout of the instrument were made.

Validity, Reliability and Bias Considerations

Since the writer's previous efforts had uncovered no evidence of a similar instrument being available for the purposes of this research, there was no suitable criterion with which to compare the questionnaire's validity. Therefore, an attempt at construct validity was made.

Validity measurement must be a relative concept, not an absolute one. Further, it will depend upon the purpose of the study. Empirical (criterion-related) validity was not possible here, since there was no prior instrument in existence with which this researcher could validate his results, and no prior studies of the population of interest in the manner desired for this study. Therefore, construct validity had to be used, and the problem was to develop an instrument which would enable the underlying theory's measurement by means of such a construct.

Lee J. Cronbach discussed construct validity in his Essentials of Psychological Testing.[3] Cronbach holds that in trying to measure something that is beneath the surface, the researcher attempts to give

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[3] Lee J. Cronbach, Essentials of Psychological Testing, 4th ed. (New York: Harper & Company, 1970).

this "something" a more precise formulation by saying what sub-variables it pulls together and how it must be related to other attitudinal or perceptual variables or to some aspects of behavior. Validity is thus inferred from such a measure, since it represents a predicted network of relationships. This would then validate both the measure and the theory behind it.

But since validity thus depends upon inference from the predicted network of relationships, a distinction must be drawn between validity as normally measured through statistical inference and validity as it is determined in psychometric inference. Kaiser and Caffrey has suggested that there are major differences between the statistical and psychometric approaches to multivariate analysis. They hold that statistical inference implies sampling from a population of subject, while psychometric inference places emphasis upon sampling from a large population of tests or statements.[4]

Certainly, in order to attain construct validity, a set of measures needs to be developed which is reliable and stable. The more varied the techniques, the larger the number of tests which represent individual attitudinal components, and the better they intercorrelate in the way predicted, the more support they offer both for the construct and for the measuring instrument.

Since psychometric inference refers, then, to the estimating of the internal consistency of the components themselves, decisions about retaining

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[4]Henry F. Kaiser and John Caffrey, "Alpha Factor Analysis," Psychometrika 30 (March 1965):1-14.

a component statement for further analysis can be based upon psychometric criteria. The components are linear composites of the manifest variables.

Logical, or construct validity then is attained to the extent that the analysis of the indicators of Food Service Competency interest are sufficiently numerous and accurate as to provide a clear-cut differentiation of the overall attitude, measured on the basis of scores on the overall instrument. If the construct is accurate, the individual statements should correlate highly with the overall instrument and the overall instrument scores should provide a differentiating ability.

Since, then, in psychometric inference, one is interested in the sampling of the variables of the instrument, not in the sampling of the persons whose scores are calculated, the consideration of both validity and reliability are closely interrelated in analysis. When several items are combined into a single index or test, one generally hopes to achieve a more valid measure of an underlying theoretical construct than would be possible by adopting any single one of the items that make up an instrument.

Indicators of the validity of the instrument are, of course, not only the plausibility of all the times and their correlation with an external criterion if one is available, but also the magnitudes of the correlations between the items. "If one turns to the intercorrelations among the various items of a test to establish its reliability, we are then using the very correlations which provide evidence concerning its validity.

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[5]Ralph Levine and John Hunter, "Statistical and Psychometric Inference in Principal Components Analysis," Multivariate Behavioral Research 6 (January 1971):105-15.

The measure of internal consistency can be interpreted as the relationship between the component and a larger component of manifest variables in the domain. Levine and Hunter felt that, in sampling this domain of behavior, we can use "the degree of reliability, or its square root," the domain validity, as a criterion for deciding the number of components.[6] To accomplish this task, there is available a measure which meets the requirements. Mulaik summarized the various methods for making such inferences as have been developed over the years in connection with the problem of validity and reliability, and concluded:

> All these developments culminated in a single coefficient for the domain reliability, validity, and/or generalizability of a test. His coefficient is perhaps best known as the Kuder-Richardson formula 20 for the internal reliability of a test, although Cronbach renamed it alpha, the coefficient of generalizability.[7]

Reliability, then, was measured by the application of an acceptable technique, Cronbach's alpha coefficient. This index has, among its other properties, that of being the average split-half correlation for all possible ways of dividing the test into two parts. This satisfied the requirement of randomness with respect to the items composing the halves of the test. Coefficient alpha gives an exact coefficient of equivalence of the full test. The magnitude of the coefficient was close to, and slightly larger than, the index of reliability for the pilot study questionnaire, evidence of a high degree repeatability.

Finally, in construct validity, much depends on the quality of the statements used and the feelings that they arouse in the respondents.

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[7] Stanley Mulaik, An Introduction to Factor Analysis (New York: McGraw-Hill Book Company, 1969), pp. 191-93.

Validity thus also depends on the candor and willingness to cooperate of the respondents and the absence of stereotyped answers. Therefore, attention must be given to both non-response bias and response set bias.

Population

The population for this study was comprised of foodservice management personnel throughout the State of Connecticut.

The population for the investigation was further classified into the following groups:

1. Restaurant Managers and/or Supervisors.
2. Institutional Foodservice Administrators.
3. Bakery Owners/Management Personnel.
4. School Lunch Management/Supervisors.
5. Foodservice Management Administrators in Lodging Operations.
6. Fast Food Managers and/or Supervisors.
7. College/University Foodservice Management and/or Supervisors.

The total population of 600 Foodservice related Management Administrators was identified through the use of the following:

1. National Restaurant Association Directory.
2. Connecticut Restaurant Association Directory.
3. Connecticut Bakers Association.
4. Multi-Unit Foodservice Association Directory.
5. American Dietetic Association Directory.
6. National Association of College and University Foodservice Managers.
7. American Hotel/Motel Association Directory.
8. Connecticut Hotel/Motel Association Directory.

Of the original population, 100 of these were specifically identified as being associated with the bakery profession. This group was sampled separately to identify the task competencies of the occupational title "Baker's Helper".

Instrument Response

After the research instrument and cover letter were reviewed and modified and the sample selected, the questionnaires were personally delivered to the population. This sequence was completed through the utilization of seventeen graduate students from the University of New Haven. This researcher felt that the individualized attention would result in a significantly higher response rate.

In addition, each participant was given the option of having the graduate student return and pick-up the questionnaire. If this was not satisfactory, a stamped, self-addressed envelope was included with the cover letter to facilitate the return of the instrument. A summary of the mailing and response is found in Tables 1 and 2.

TABLE 1

CLASSIFICATION OF USABLE RETURNS

	NUMBER	PERCENT
Personally Delivered	600	100.0%
Not Returned	107	17.8%
Returned	493	82.2%
Ineffective Response	5	.01%
(Returned too late, subject left the operation, deceased, refused to answer, etc.)		
Effective Response	488	81.3%
(Data Obtained)		

TABLE 2

PERCENTAGE BREAKDOWN OF TOTAL POPULATION RESPONSE

	Total Management Sampled	Total Management Response	Total Management Response Percentage
Foodservice Management/Supervisors	500	415	83%
Bakery Related Owners/Management	100	78	17%
TOTALS	600	493	100%

TABLE 3

POPULATION BREAKDOWN BY EACH FOODSERVICE RELATED CATEGORY

Category Managers/ Supervisors	Questionnaires Distributed	Percentage of Total Questionnaires	Response by Category	Percentage of Response by Category	Percentage of Category Response to Total Questionnaire
Full-Service Restaurant	290	58%	263	90.6%	52.6%
Fast Food Restaurants	81	16.2%	69	85.1%	13.8%
Institutional	33	6.06%	21	63.6%	4.2%
School Lunch	25	5%	14	56%	2.8%
Foodservice in Lodging	51	10.2%	44	86%	8.8%
College/ University	10	2%	4	40%	.08%
TOTALS	500	100%	415		

TABLE 4

POPULATION BREAKDOWN BY EACH BAKER RELATED CATEGORY

Category	Questionnaires Distributed	Percentage of Total Questionnaires	Response by Category	Percentage of Response by Category	Percentage of Category Response to Total Questionnaires
Bakery Owners	44	44%	35	79.5%	35%
Bakery Managers/ Supervisors	18	18%	13	72.2%	13%
Supermarket Bakery Supervisors	19	19%	14	73.6%	14%
Institutional Bakery Supervisors	21	21%	16	76.1%	16%
TOTALS	100	100%	78	76.1%	16%

TABLE 5

OCCUPATIONAL JOB CLASSIFICATION RESPONSE TO FOODSERVICE RELATED CATEGORIES

Category	Chef/Cook	Cooks Assistant	Foodservice Worker	Food Preparation Helper	Short Order Cook
Full-Service Restaurant	263	263	263	263	263
Fast Food Restaurant	69	69	69	69	69
Institutional	21	21	21	21	21
School Lunch	14	14	14	14	14
Foodservice in Lodging	44	44	44	44	44
College/University	4	4	4	4	4
TOTALS	415	415	415	415	415

TABLE 6

OCCUPATIONAL JOB CLASSIFICATION RESPONSE TO BAKER RELATED CATEGORIES

Category	Bakers Helper
Bakery Owners	35
Bakery Managers/Supervisors	13
Supermarket Bakery Supervisors	14
Institutional Bakery Supervisors	16
TOTAL	78

Interpretation of Data

To provide answers to the research the following statistical analysis was used. Each individual task was rated according to two variables: the first being PROFICIENCY; the second FREQUENCY. The proficiency scale consists of five ratings:

1. No Proficiency
2. Slight Proficiency
3. Moderate Proficiency
4. Considerable Proficiency
5. Complete Proficiency

The frequency scale has three ratings:

1. Never
2. Frequently
3. Constantly

Based on the ratings responded, a Raw Percentage Value was calculated for each task in terms of the proficiency rating response and the frequency rating response. These raw percentages determine the proportion of total respondents who rated the task with a specific level of proficiency. A raw percentage was also calculated to determine the number of total respondents who rated the task with a specific frequency. For example: 20 percent of the respondents rated task number one with a "complete proficiency" or "5". Or 47 percent of the respondents rated task number one with a "constantly" frequency score, or "C". Once these raw percentages were calculated for all tasks in terms of both variables (proficiency and frequency) a distribution was completed for each task.

The criteria for the freqency distribution is as follows: If over 50 percent of the respondents rated the task with four (4) or five (5) to

the proficiency question AND a "C" to the frequency question; that task would be included for further analysis. Tasks which did not meet both criteria were excluded from further analysis. The maximum value of this percentage would be 200; (i.e., if 100 percent of the participants responded 4 or 5 to the proficiency question AND 100 responded to the frequency question with a "C" rating). The minimum value is 100. (i.e., 50 percent of the participants responded 4 or 5 to the proficiency question with a rating of "C").

The next phase produced a ranking of the raw percentage score to indicate the relative importance of the task. This ranking was done within each of the six (6) occupational titles to determine those tasks considered important for that job.

In reviewing the Results of Task Analysis Questionnaire (see page), one will see the job title, in ranked order of importance, and the raw percentage score of the task, (this score being a number ranging from 100 to 200). The raw percentage score, is the number of the task as it appears on the questionnaire.

In some cases, several tasks received the same raw percentage score listed individually under this score and are listed in the order in which they appear in the questionnaire.

VI. TASK ANALYSIS RESULTS

TABLE 7

STATISTICAL ANALYSIS ACCORDING TO PROFICIENCY & FREQUENCY OF INDIVIDUAL TASKS

CHEF/COOK

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	188	131	Show personal qualities as; good grooming, appropriate dress and cooperative attitude.
2	179	4	Maintain a clean and sanitary work station.
		133	Use time efficiently, practice team work and self-direction in performing tasks.
		134	Perform tasks responsibly, efficiently and demonstrate good work habits.
3	178	132	Maintain positive human relationships while working with others.
4	177	21	Identify, use and care for knives properly.
		24	Work correctly with all kitchen cooking equipment; oven, broiler, and microwave.
		34	Use of small equipment correctly.
		74	Be able to identify spoiled and inedible meats.
5	176	27	Be able to proportion food.
6	175	3	Use safe techniques in performing foodservice tasks.
		26	Be able to measure dry and liquid ingredients.
		135	Understand and meet the standard of excellence in food quality.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
7	174	1	Be able to apply sanitary personal habits.
		25	Be able to weigh and measure ingredients.
		37	Properly uses spices, herbs, seasonings and extracts in quantity cookery.
8	173	2	Know appropriate dress for safe working conditions.
		20	Knowledge of food industry terminology; blanch, fold, marinate.
		23	Be able to slice and carve meats and poultry.
		75	Know how to store meats properly.
9	172	5	Handle dishes, food and beverage in sanitary manner.
		33	Identify small equipment; hand utensils, can opener, blender.
		87	Know correct freezing method for leftover poultry.
10	171	18	Report to supervisor any equipment in need of repair.
		22	Know proper method for sharpening knives.
		35	Identify spices, herbs, seasonings, and extracts that are used in flavoring.
11	170	149	Follows posted work shedule.
12	169		Able to identify spoiled and inedible fish and shellfish.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
13	168	53	Prepare chowders.
		78	Know moist heat cooking methods for meat; braising, simmering, steaming and blanching.
		81	Know cooking time for specified degree of doneness.
		91	Know proper storing requirements for fish.
		150	Adheres to institutional tardiness policy.
14	166	36	State correct care and storage of spice, herbs, seasonings, and extracts.
		121	Know correct method for frying, seafood, meat, poultry and vegetables.
15	165	48	Able to prepare stock from beef, veal, poultry, fish and vegetables.
		49	Prepare brown stock soups.
		86	Know correct thawing techniques for poultry.
16	164	92	Know correct thawing techniques for fish.
17	163	84	Know methods for cooking poultry; roasting, poaching, broiling, frying and sauteing.
18	162	50	Prepare consomme and broths.
19	161	54	Prepare purees.
		61	Able to use starches as a thickening agent.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
20	160	30	Identify abbreviation for measurements in food production.
		52	Prepare cream soups and bisques.
		103	Know various cooking methods for vegetables; steaming, boiling, blanching, creaming, sauteing and baking.
		120	Know correct temperatures for deep frying.
		138	Apply knowledge and skills acquired in the classroom.
21	159	31	State procedures for using a standardized recipe.
		51	Prepare tomato soups.
		73	Be able to identify meat cuts and USDA grades.
22	158	11	Know the difference between food poisoning and food-borne illness.
		66	Prepare tomato sauces and know their uses.
		77	Know dry heat cooking methods for meats; broiling, roasting, baking, barbecuing and sauteing.
		85	Able to prepare poultry for salads, sandwiches and entrees.
		106	Know various cutting techniques for vegetables, dicing, chopping and slicing.
		107	Know correct care and storage for vegetables.
		159	Rotate stock.
23	157	156	Use correct refrigeration and freezer storage.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
24	156	28	Adapt recipes to quantity needed.
25	155	62	Able to use all standard thickening agents.
		64	Prepare neutral and white sauces and know their uses.
		97	Know how to prepare breadings and stuffings.
		105	Know proper cleaning methods for vegetables.
		152	Ability to quickly correct any errors made in food preparation.
26	154	82	Able to marinate meats.
		104	Know how to prepare fresh, frozen, canned or dehydrated vegetables.
27	153	56	Be able to prepare garnishes.
		117	Know correct use of deep fryer.
		155	Know storage precedures for dry goods.
28	152	69	Prepare cheese sauces and know their uses.
		83	Able to identify poultry; chicken, turkey, ducks, geese, squab, capon, and cornish game hens.
		158	Use correct procedures for issuing supplies.
29	151	71	Prepare milk-based sauces and know their uses.
		79	Have knowledge of internal meat temperatures, and predicted yields.
		115	Know correct cooking methods for pasta.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
30	150	17	Report accidents promptly and document within 24 hours.
		41	Know which vegetables are served during each season.
		63	Prepare brown sauces and know their uses.
		119	Know different types of fats and oils and their uses.
31	149	13	Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.
		32	Solve problems in increasing and decreasing recipes.
		95	Know various cooking methods for fish; broiling, baking, sauteing, creaming, poaching and boiling.
		102	Identify and select quality vegetables.
32	147	19	Convert recipes to standardized recipes.
		109	Know how to prepare fruit; wash, peel and cut.
33	146	148	Leftover amounts are properly communicated to proper production staff.
34	145	100	Know proper storage requirements for shellfish.
35	144	96	Know various cooking methods for shellfish; broiling, baking, sauteing and boiling.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
36	143	59	Have an aesthetic sense; create attractive and original ways of presenting food.
		60	Able to prepare a roux.
		139	Demonstrate knowledge and skills needed for entry-level employment in the food service industry.
		154	Know receiving procedures; weighing, quality inspection, and price on invoice.
37	142	16	Be able to obtain a food handler's card.
		118	Know how to filter grease for re-use.
38	140	70	Prepare butter sauces and know their uses.
		111	Know cooking methods for brown, white or converted rice.
39	139	116	Prepare batter for breaded foods.
40	138	72	Prepare dessert sauces and know their uses.
41	137	80	Able to determine doneness by pressure or touch.
42	136	147	Leftover foods are labeled, dated and properly refrigerated.
		151	Knows food cost uses for leftover food.
		157	Maintain physical inventory for dry goods and food items.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
43	135	42	Describe the use of cycle menus.
		58	Place garnish attractively on completed platter.
		88	Know various fish classification; salt water, fresh water and shellfish.
		108	Know when certain vegetables are "in-season."
		137	Identify basic principles of food purchasing.
44	134	153	Know purchasing procedures for perishables, staples, and contract items.
45	133	12	Know three food-borne illnesses, their causes and preventive procedures.
		45	Review menu items for popularity and make necessary changes.
		55	Prepare a variety of cold soups.
		110	Know when certain fruit are "in-season."
46	132	68	Prepare sour cream sauces and know their uses.
		98	Know proper procedure for breading fish and shellfish.
47	131	40	Review menu items for popularity and change items as needed.
		130	Understand the scope of the food service industry and its employment opportunities.
		136	Solve problems in food cost control and record-keeping.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
48	129	57	Be creative and unique with garnish development.
		94	Able to fillet fish properly.
49	128	65	Prepare egg yolk and vinegar sauces and know their uses.
		99	Recognize by sight the doneness of shellfish.
		129	Arrange hors d'oeuvres in an attractive and appetizing way.
50	127	6	Select appropriate detergents and sanitizers.
		112	Know how to prepare a variety of rice dishes.
51	125	140	Demonstrate knowledge and skills needed for continuing training in a school of higher education.
		145	Ability to assign, coordinate, and inspect routine food production tasks.
52	123	93	Able to clean fish properly.
		101	Know when certain shellfish are "in-season."
53	122	89	Know the composition of fish.
54	112	44	Record menu items sold per meal.

COOK'S ASSISTANT

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	174	4	Maintain a clean and sanitary work station.
2	173	3	Use safe techniques in performing food service tasks.
3	172	34	Use of small equipment correctly.
4	171	1	Be able to apply sanitary personal habits.
5	170	2	Know appropriate dress for safe working conditions.
		5	Handle dishes, food and beverage in a sanitary manner.
6	167	27	Be able to portion food.
		124	Use time efficiently, practice team work and self-direction in performing tasks.
7	165	26	Be able to measure dry and liquid ingredients.
8	161	94	Know proper cleaning methods for vegetables.
		122	Show personal qualities as; good grooming, appropriate dress and cooperative attitude.
		125	Perform tasks responsibly, efficiently and demonstrate good work habits.
9	160	25	Be able to weigh and measure ingredients.
		126	Understand and meet the standard of excellence in food quality.
10	159	66	Know how to store meats properly.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
11	158	65	Be able to identify spoiled and inedible meat.
		104	Prepare baked potatoes.
		123	Maintain positive human relationships while working with others.
12	157	18	Report to supervisor any equipment in need of repair.
		21	Identify, use, and care for knives properly.
		22	Be able to slice and carve meats and poultry.
		33	Identify small equipment; hand utensils, can opener, blender.
		68	Know moist heat cooking methods for meat; braising, simmering, steaming, and blanching.
		137	Adheres to institutional tardiness policy.
13	156	82	Know correct thawing techniques for fish.
14	155	24	Work correctly with all kitchen cooking equipment; oven, broiler and microwave.
15	154	95	Know various cutting techniques for vegetables; dicing, chopping and slicing.
16	153	76	Know correct thawing techniques for poultry.
		81	Know proper storing requirements for fish.
		105	Cook French fries correctly.
17	152	77	Know correct freezing methods for leftover poultry.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
18	151	107	Know correct use of deep fryer.
19	150	30	Identify abbreviation for measurements in food production.
20	149	75	Able to prepare poultry for salads, sandwiches, and entrees.
		136	Follows posted work schedule.
21	148	67	Know dry heat cooking methods for meat; broiling, roasting, baking, barbecuing and sauteing.
		128	Apply knowledge and skills acquired in the classroom to work experience.
22	147	23	Be able to slice and carve meats and poultry.
		96	Know correct care and storage for vegetables.
23	146	16	Be able to obtain a food handler's card.
		69	Have knowledge of internal meat temperatures, and predicted yields.
24	145	11	Know the difference between food poisoning and food-borne illness.
		90	Know proper storage requirements for shellfish.
		129	Demonstrate knowledge and skills needed for entry-level employment in the food service industry.
25	144	71	Know cooking time for specified degree of doneness.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
26	143	13	Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.
		35	Identify spices, herbs, seasonings, and extracts that are used in flavoring.
		98	Know how to prepare fruit; wash, peel and cut.
27	142	36	State correct care and storage of spices, herbs, seasonings, and extracts.
		74	Know methods of cooking poultry; roasting, poaching, broiling, frying and sauteing.
		80	Able to identify spoiled and inedible fish and shellfish.
		92	Know various cooking methods for vegetables; steaming, boiling, blanching, creaming, sauteing and baking.
28	140	127	Know the life span of food items.
29	138	72	Able to marinate meats.
30	137	141	Use correct refrigeration and freezer storage.
31	136	37	Properly uses spices, herbs, seasonings and extracts in quantity cookery.
		93	Know how to prepare fresh, frozen, canned or dehydrated vegetables.
		103	Peel and blanch potatoes correctly.
		108	Know how to filter grease for re-use.
		134	Leftover foods are labeled, date and properly refrigerated.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
32	135	20	Knowledge of food industry terminology; blanch, fold, marinate.
		73	Able to identify poultry; chicken, turkey, ducks, geese, squab, capon, and cornish game hens.
33	133	110	Know correct temperatures for deep frying.
34	132	142	Rotate Stock.
35	131	12	Name three food-borne illnesses, their causes and preventive procedures.
36	130	140	Know storage procedures for dry goods.
		146	Handle operational or personnel problems in absence of the chef.
37	129	15	Know employee rights and responsibilities according to OSHA.
		17	Report accidents promptly and document within 24 hours.
		42	Prepare cream soups and bisques.
		91	Identify and select quality vegetables.
		99	Know cooking methods for brown, white or converted rice.
		111	Know correct method for frying, seafood, meat, poultry and vegetables.
38	128	78	Know various fish classification; salt water, freshwater and shellfish.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
39	127	31	State procedures for using a standardized recipe.
		143	Carries pans, kettles, and trays to and from work station.
40	125	39	Able to prepare stock from beef, veal, poultry, fish, and vegetables.
		43	Prepare chowders.
		57	Prepare tomato sauces and know their uses.
		135	Leftover amounts are properly communicated to proper production staff.
41	124	6	Select appropriate detergents and sanitizers.
42	123	41	Prepare tomato soup.
		97	Know when certain vegetables are "in-season."
		101	Know various types of pasta; spaghetti, noodles, macaroni, gnocchi, and ravioli.
		102	Know correct cooking methods for pasta.
43	122	46	Be able to prepare garnishes.
44	121	44	Prepare purees.
45	120	70	Able to determine doneness by pressure or touch.
46	119	47	Be creative and unique with garnish development.
47	118	14	Demonstrate the technique to aid victims of choking.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
48	116	55	Prepare neutral and white sauces and know their uses.
49	114	89	Recognize by sight the doneness of shellfish.
50	113	51	Able to use starches as thickening agent.
51	111	138	Ability to quickly correct any errors made in food preparation.
		144	Assist serving food on the line.

FOOD SERVICE WORKER

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	169	85	Adheres to institutional tardiness policy.
2	162	4	Maintain a clean and sanitary work station.
3	160	84	Follows posted work schedule.
4	159	77	Perform tasks responsibly, efficiently and demonstrate good work habits.
5	158	5	Handle dishes, food and beverage in a sanitary manner.
6	155	76	Use time efficiently, practice teamwork, and self-direction in performing tasks.
7	154	1	Be able to apply sanitary personal habits.
		2	Know appropriate dress for safe working conditions.
8	152	78	Understand and meet the standard of excellence in food quality.
9	151	3	Use safe techniques in performing food service tasks.
10	150	96	Shut off equipment when finished.
11	149	75	Maintain positive human relationships while working with others.
12	145	18	Report to supervisor any equipment in need of repair.
13	142	74	Show personal qualities as; good grooming, appropriate dress, and cooperative attitude.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
14	138	51	Refill condiments.
		81	Assists in distributing hot and cold foods to food carts and trucks.
15	137	50	Refill juice and soda dispenser.
		79	Apply knowledge and skills acquired in the classroom to work experience.
		97	Assemble trays according to pre-marked menu for patients.
16	136	6	Select appropriate detergents and sanitizers.
17	135	7	Prepare dishes for machine or hand washing.
		82	Leftover foods are labeled, dated and properly refrigerated.
18	134	8	Wash and sanitize dishes by hand according to state health division approved methods.
		9	Maintain correct water temperatures for all stages of the dishwashing cycle.
		45	Be able to identify spoiled and inedible meat.
19	132	10	Able to operate three standard commercial dishwashing machines.
20	131	102	Scrapes soiled serviceware upon delivery back to kitchen from hospital floors.
21	128	17	Report accidents promptly and document within 24 hours.
22	127	40	Replenish serving line
		44	Cut and plate desserts.
		95	Handle pressure and a fast pace.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
23	125	38	Replenish salad bar.
24	124	39	Set up serving line.
		49	Maintain supply of ready coffee.
25	123	48	Warm bread and rolls.
		83	Leftover amounts are properly communicated to proper production staff.
		99	Carry trays for handicapped patients.
		101	Distribute food trays to floors for distribution.
26	122	13	Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.
		104	Demonstrate knowledge and skills needed for entry-level employment in the food service industry.
27	120	34	Use spoons or scoops to measure salads and desserts.
28	119	64	Check food temperature before serving.
29	117	46	Make hot and cold sandwiches.
30	114	59	Know correct care and storage for vegetables.
31	113	14	Demonstrate the technique to aid victims of choking.
32	111	37	Set up salad bar.
33	109	100	Distribute and collect menus.

FOOD PREPARATION HELPER

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	164	4	Maintain a clean and sanitary work station.
2	162	3	Use safe techniques in performing food service tasks.
3	160	78	Maintain positive human relationships while working with others.
4	159	80	Perform tasks responsibly, efficiently and demonstrate good work habits.
5	155	2	Know appropriate dress for safe working conditions.
		5	Handle dishes, food and beverage in a sanitary manner.
6	153	1	Be able to apply sanitary personal habits.
		79	Use time efficiently, practice team work and self-direction in performing tasks.
7	151	89	Adheres to institutional tardiness policy.
8	150	18	Report to supervisor any equipment in need of repair.
		77	Show personal qualities as; good grooming, appropriate dress and cooperative attitude.
		88	Follows posted work schedule.
9	147	81	Understand and meet the standard of excellence in food quality.
10	130	86	Leftover foods are labeled, dated and properly refrigerated.
11	129	34	Use of small equipment correctly.
		61	Know correct care and storage of vegetables.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
12	128	63	Know how to prepare fruit; wash, peel and cut.
13	127	13	Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.
14	126	33	Identify small equipment; hand utensils, can opener, blender.
15	124	49	Know correct thawing techniques for poultry.
		87	Leftover amounts are properly communicated to proper production staff.
16	123	11	Know the difference between food poisoning and food-borne illness.
		46	Be able to identify spoiled and inedible meat.
17	122	27	Be able to portion food.
		92	Know storage procedures for dry goods.
		93	Use correct refrigeration and freezer storage.
18	121	15	Know employee rights and responsibilities according to OSHA.
		83	Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.
19	120	25	Be able to weigh and measure ingredients.
		26	Be able to measure dry and liquid ingredients.
		60	Know various cutting techniques for vegetables; dicing, chopping and slicing.
20	119	53	Know proper storing requirements for fish.
21	118	47	Know how to store meats properly.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
22	117	21	Identify, use and care for knives properly.
23	116	16	Be able to obtain a food handler's card.
		17	Report accidents promptly and document within 24 hours.
24	114	24	Work correctly with all kitchen cooking equipment; oven, broiler, and microwave.
		54	Know correct thawing technique for fish.
25	113	71	Prepare fresh vegetables for a platter.
26	112	30	Identify abbreviation for measurements in food production.
27	109	6	Select appropriate detergents and sanitizers.

SHORT ORDER COOK

RANKED ORDER OF IMPORTANCCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	166	19	Report to supervisor any equipment in need of repair.
		74	Make breakfast dishes, pancakes, french toast, and omelets.
2	164	3	Use safe techniques in performing food service tasks.
		33	Identify small equipment; hand utensils, can opener, blender.
		73	Recognize spoiled and inedible eggs.
3	162	2	Know appropriate dress for safe working conditions.
		4	Maintain a clean and sanitary work station.
		27	Be able to portion food.
4	161	76	Toast breads.
		141	Fill all orders for a customer quickly and correctly.
5	160	1	Be able to apply sanitary personal habits.
		22	Know proper method for sharpening knives.
		24	Work correctly with all kitchen cooking equipment; oven, broiler and microwave.
		72	Know cooking methods for eggs; boiled, coddled, poached, fried and scrambled.
		75	Cook bacon, sausage and ham.
		100	Know correct use of deep fryer.
		104	Know correct method for frying; seafood, meat, poultry and vegetables.
		129	Follows posted work schedule.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
6	158	5	Handle dishes, food and beverage in a sanitary manner.
		21	Identify, use and care for knives properly.
		103	Know correct temperatures for deep frying.
		118	Use time efficiently, practice team work and self-direction in performing tasks.
		120	Understand and meet the standard of excellence in food quality.
7	157	101	Know how to filter grease for re-use.
8	156	34	Use of small equipment correctly.
9	155	117	Maintain positive human relationships while working with others.
		130	Adheres to institutional tardiness policy.
10	154	105	Prepare hot sandwiches by broiling or grilling.
		116	Show personal qualities as; good grooming, appropriate dress and cooperative attitude.
		119	Perform tasks responsibly, efficiently and demonstrate good work habits.
11	152	13	Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.
12	151	58	Be able to identify spoiled and inedible meat.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
13	150	17	Report accidents promptly and document within 24 hours.
		25	Be able to weigh and measure ingredients.
		59	Know how to store meats properly.
		77	Able to identify spoiled and inedible fish and shellfish.
14	146	26	Be able to measure dry and liquid ingredients.
15	145	102	Know different types of fats and oils and their use.
16	144	61	Grind meat correctly.
		106	Prepare cold sandwiches; open-face, rolled, pinwheel and layered.
		121	Demonstrate knowledge and skills needed for entry-level employment in the food service industry.
17	142	23	Be able to slice and carve meats and poultry.
		139	Able to read, understand and write English.
18	141	138	Replenish food on line.
19	140	30	Identify abbreviation for measurements in food production.
		66	Know cooking time for specified degree of doneness.
		78	Know proper storing requirements for fish.
		135	Use correct refrigeration and freezer storage.
20	139	137	Rotate stock.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
21	138	65	Able to determine doneness by pressure or touch.
		71	Know correct freezing methods for leftover poultry.
		79	Know correct thawing techniques for fish.
22	136	11	Know the difference between food poisoning and food-borne illness.
		16	Be able to obtain a food handler's card.
23	135	20	Knowledge of food industry terminology; blanch, fold, marinate.
24	134	62	Know dry heat cooking methods for meat; broiling, roasting, baking, barbecuing and sauteing.
		67	Able to identify poultry; chicken, turkey, ducks, geese, squab, capon and cornish game hens.
		68	Know methods of cooking poultry; roasting, poaching, broiling, frying and sauteing.
		132	Ability to quickly correct any errors made in food preparation.
25	132	15	Know employee rights and responsibilities according to OSHA.
		60	Tenderize meats.
		128	Leftover amounts are properly communicated to proper production staff.
26	131	127	Leftover foods are labeled, dated, and properly refrigerated.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
27	130	35	Identify spices, herbs, seasonings and extracts that are used in flavoring.
		140	Possess basic math skills.
28	129	70	Know correct thawing techniques for poultry.
29	128	87	Know proper storage requirements for shellfish.
		88	Open clams and oysters correctly.
30	126	69	Able to prepare poultry for salads, sandwiches, and entrees.
		82	Know various cooking methods for fish; broiling, baking, sauteing, creaming, poaching and boiling.
31	125	12	Name three food-borne illinesses, their causes and preventive procedures.
		64	Have knowledge of internal meat temperatures, and predicted yields.
		115	Understand the scope of food service.
32	124	14	Demonstrate the technique to aid victims of choking.
		28	Adapt recipes to quantity needed.
		92	Know various cutting techniques for vegetables; dicing, chopping and slicing.
33	122	94	Know how to prepare fruit; wash, peel and cut.
34	120	37	Properly use spices, herbs, seasonings, and extracts in quantity cookery.
		47	Ladle soups.
		63	Know moist heat cooking methods for meat; braising, simmering, steaming and blanching.
		93	Know correct care and storage for vegetables.
		99	Prepare batter for breaded foods.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
35	118	91	Know proper cleaning methods for vegetables.
36	116	31	State procedures for using a standardized recipe.
37	114	48	Be able to prepare garnishes.
38	112	86	Recognize by sight the doneness of shellfish.
39	111	49	Place garnish attractively on completed platter.
40	109	52	Able to use all standard thickening agents.

BAKER'S HELPER

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	179	2	Know appropriate dress for safe working conditions.
2	178	59	Read thermometer correctly.
3	176	58	Tell time correctly.
4	174	68	Sift flour correctly.
5	173	1	Be able to apply sanitary personal habits.
6	169	4	Maintain a clean and sanitary work station.
		31	Identify abbreviation for measurements in food production.
7	168	34	Identify small equipment; hand utensils, can opener, blender.
		55	Remove baked products from oven and place on racks.
		96	Follows posted work schedule.
8	167	3	Use safe techniques in performing food service tasks.
		67	Know various types of flours and shortenings.
		83	Maintain positive human relationships while working with others.
9	166	54	Place pans in dough oven to bake.
		60	Mix and knead dough correctly.
		85	Perform tasks responsibly, efficiently and demonstrate good work habits.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
10	165	66	Separate eggs correctly.
11	164	65	Use correct whipping technique.
		71	Place dough in proof box for rising.
12	163	61	Bake various types of bread.
		64	Know different mixer sizes and use them correctly.
13	162	5	Handle dishes, food and beverage in a sanitary manner.
		27	Be able to measure dry and liquid ingredients.
		84	Use time efficiently, practice teamwork, and self-direction in performing tasks.
14	161	35	Use of small equipment correctly; duchess dough divider, dough scale, proof box.
		104	Use correct refrigeration and freezer storage.
15	160	26	Be able to weigh and measure ingredients.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
16	158	18	Report to supervisor and equipment in need of repair.
		21	Know baking terminology.
		50	Know various types of desserts; cream-filled, muffins, biscuits.
		53	Scoop drop cookies to level scoop onto lined sheet pan to pattern.
		69	Make fruit fillings lump-free.
		82	Show personal qualities as; good grooming, appropriate dress and cooperative attitude.
17	156	46	Know different types of sugar.
		63	Know correct cooking temperatures and humidity.
18	155	47	Use a pastry bag.
19	153	72	Roll out dough for pie crust and pastry correctly.
20	152	51	Prepare pans, grease or line loaf pans.
		103	Store fillings between 35F and 38F.
21	151	48	Prepare different types of frosting; icings and meringues.
22	150	52	Place hand cut cookies on lined sheet pan at proper place.
		86	Understand and meet the standard of excellence in food quality.
		97	Adheres to institutional tardiness policy.
23	148	28	Be able to portion food.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
24	145	32	State procedures for using a standardized recipe.
		70	Know different types of bread and crackers.
25	144	45	Know the effects of salt and sugar on yeast.
		49	Use decorating tips accordingly.
26	143	17	Report accidents promptly and document within 24 hours.
27	142	24	Work correctly with all kitchen cooking equipment; oven, broiler and microwave.
28	140	89	Apply knowledge and skills acquired in the classroom to work experience.
29	138	25	Know both English and metric measuring systems.
		90	Demonstrate knowledge and skills needed for entry-level employment in the food service industry.
		94	Leftover foods are labeled, dated and properly refrigerated.
30	136	95	Leftover amounts are properly communicated to proper production staff.
31	134	38	Properly use spices, herbs, seasonings, and extracts in quantity cookery.
32	133	16	Be able to obtain a food handler's card.
		107	Rotate stock.
33	131	111	Prepare dessert sauces and know their uses.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
34	130	33	Solve problems in increasing and decreasing recipes.
35	128	13	Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.
		15	Know employee rights and responsibilities according to OSHA.
		22	Identify, use and care for knives properly.
36	127	62	Have knowledge of nutritive value of bread and rolls.
		102	Know storage procedures for dry goods.
37	126	37	State correct care and storage of spices, herbs, seasonings, and extracts.
38	125	57	Prepare petit four and pate choux products.
39	124	56	Prepare candy.
40	122	93	Participate in continuing education programs in the food service field.
41	121	81	Understand the scope of the food service industry and its employment opportunities.
42	120	36	Identify spices, herbs, seasonings, and extracts that are used in flavoring.
		75	Know how to filter grease for re-use.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONAIRE	TASK
43	118	14	Demonstrate the technique to aid victims of choking.
44	116	20	Knowledge of food industry terminology; blanch, fold, marinate.
		74	Know correct use of deep fryer.
		77	Know correct temperatures for deep frying.

In addition, a second statistical analysis was completed. In effect, this analysis is identical to the first except "occasionally" was combined with considerable or complete proficiency rather than "constantly".

If a task was occasionally employed (i.e., if the proportion of respondents rating that task "occasionally" was greater than, or equal to .%) and if 50 percent or more of the respondents judged that the task required considerable or complete proficiency, it is listed in the following table.

TABLE 8

CHEF/COOK

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	129	122	Prepare hors d'oeuvres; fillings, spreads and dips.
		125	Prepare fresh vegetables for a platter.
2	122	29	Develops new recipes.
3	120	124	Prepare finger sandwiches.
4	114	39	Plan menus with dietary consultant on therapeutic menus.
5	109	7	Prepare dishes for machine or hand washing.
6	105	114	Know how to make pasta from scratch.
7	104	10	Able to operate three standard commercial dishwashing machines.

COOK'S ASSISTANT

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	127	28	Adapt recipes to quantity needed.
2	125	32	Solve problems in increasing and decreasing recipes.
3	122	85	Know various cooking methods for fish; broiling, baking, sauteing, creaming, poaching and boiling.
		112	Prepare hors d'oeuvres; fillings, spreads, and dips.
4	120	40	Prepare consommes and broths.
5	119	100	Know how to prepare a variety of rice dishes.
		113	Know different types of bread and crackers.
6	118	45	Prepare a variety of cold soups.
		52	Able to use all standard thickening agents.
		117	Prepare different cheese and cold meat platters.
7	117	84	Able to fillet fish properly.
		117	Prepare different cheese and cold meat platters.
8	116	49	Have an aesthetic sense; create attractive and original ways of presenting food.
		133	Assists in distributing hot and cold foods to food carts and trucks.
9	115	64	Be able to identify meat cuts and USDA grades.
10	113	79	Know the composition of fish.
		119	Arrange hors d'oeuvres in an attractive and appetizing way.
11	112	62	Prepare milk-based sauces and know their uses.
12	109	7	Prepare dishes for machine or hand washing.
		19	Convert recipes to standardized recipes.

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
13	106	61	Prepare butter sauces and know their uses.
14	105	8	Wash and sanitize dishes by hand according to state health division approved methods.
15	104	9	Maintain correct water temperatures for all stages of the dishwashing cycle.
16	101	120	Change soda syrups.

FOOD PREPARATION HELPER

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	121	37	Properly use spices,herbs, seasonings, and extracts in quantity cookery.
2	117	42	Place garnish attractively on completed platter.
3	111	41	Be creative and unique with garnish development.
		75	Arrange hors d'oeuvres in an attractive and appetizing way.
		76	Understand the scope of the food service industry and its employment opportunities.
4	110	7	Prepare dishes for machine or hand washing.
		22	Know proper method for sharpening knives.
		69	Know different types of bread and crackers.
		84	Demonstrate knowledge and skills needed for continuing training in a school of higher education.
5	108	65	Know various types of pasta; spaghetti, noodle, macaroni, gnocci and ravioli.
		66	Know how to filter grease for re-use.
		67	Know different types of fats and oils and their uses.
6	106	8	Wash and sanitize dishes by hand according to state health division approved methods.
7	103	23	Be able to slice and carve meats and poultry.
		73	Prepare different cheese and cold meat platters.

FOOD SERVICE WORKER

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	112	43	Make dessert toppings, icings.
2	107	42	Make puddings and gelatins.
3	106	61	Know how to filter grease for re-use.
4	104	53	Know proper storing requirements for fish.
5	101	12	Name three food-borne illnesses, their causes and preventive procedures.

SHORT ORDER COOK

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	120	85	Know proper procedure for breading fish and shellfish.
2	118	84	Know various cooking methods for shellfish; broiling, baking, sauteing and boiling.
3	115	133	Know receiving procedures; weighing, quality, inspection and price on invoice.
4	107	6	Select appropriate detergents and sanitizers.
		7	Prepare dishes for machine or hand washing.
		122	Demonstrate knowledge and skills needed for continuing training in a school of higher education.
5	106	29	Develops new recipes.
6	105	131	Know food cost uses for leftover food.
7	103	8	Wash and sanitize dishes by hand according to state health division approved methods.
		126	Assists in distributing hot and cold foods to food carts and trucks.

BAKER'S HELPER

RANKED ORDER OF IMPORTANCE	RAW PERCENTAGE SCORE OF TASK	TASK NUMBER FROM QUESTIONNAIRE	TASK
1	108	19	Convert recipes to standardized recipes.
2	107	30	Develops new recipes.
		101	Inspection and price on invoice.

TABLE 9

CROSS ANALYSIS OF RESULTS FOR THE SIX OCCUPATIONAL JOB CLASSIFICATIONS WITH ALL CATEGORIES SHOWING TASKS WITH .05 SIGNIFICANCE

Rank Order	Task
1	Maintain a clean and sanitary work station
2	Show personal qualities as good grooming, cooperative and appropriate dress
3	Use time efficiently, practice teamwork, and self-direction
4	Perform tasks responsibly, efficiently and demonstrate good work habits
5	Maintain positive human relationships while working with others
6	Use of all kitchen cooking equipment correctly, small (hand) and large equipment
7	Use safe techniques in performing foodservice tasks
8	Understand and meet the standard of excellence in food quality
9	Handle dishes, food and beverage in a sanitary way
10	Know appropriate dress for safe working
11	Adheres to institutional tardiness policy
12	Report to supervisor any equipment in need of repair
13	Follow posted work schedule
14	Be able to identify spoiled/inedible meat, fish and poultry
15	Be able to weigh and measure dry and liquid ingredients
16	Know proper storing of meat, fish and poultry
17	Know correct thawing techniques for meat, fish and poultry
18	Know various care, storage and cutting techniques for vegetables
19	Identify abbreviation for measurements in food production
20	Leftover foods are labelled, dated and properly refrigerated
21	Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry

Rank Order	Task
22	Apply knowledge and skill acquired in the classroom to work experience
23	Use of all kitchen cooking equipment correctly; oven, broiler, deep-fryer, microwave
24	Identify and use correctly small equipment; hand utensils, can opener, blenders
25	Identify, use and care for knives properly

University of New Haven

SCHOOL OF HOTEL, RESTAURANT, AND TOURISM ADMINISTRATION
Ronald A. Usiewicz, Ph.D., Dean
300 Orange Avenue
West Haven, Connecticut
06516
203-932-7000

APPENDIX A

As you may be aware, the University of New Haven has received a state grant to investigate and develop competency standards and certification requirements for secondary-level vocational food service programs.

Because you are an integral part of the food service programs and your expertise is valued, I am asking for your assistance. During the next several weeks a food service graduate student will be contacting you personally to set up a one hour interview. The project is at the stage of identifying competencies in regard to jobs and their task analysis. Your input in relation to competencies is extremely important and necessary for the completion of this study.

In order to establish and develop consistency in regard to competencies, standards and lesson objectives, can you please duplicate copies of your lesson plans and stated objectives. The graduate student will pick them up from you the day of the interview.

To preserve academic freedom and confidentiality of your materials no teacher or school will be used as an example or be identified. The information will be evaluated and utilized as reference resources.

In advance, I thank you for your cooperation and assistance. If you should have any questions or concerns in regard to my request, please feel free to contact me.

Sincerely yours,

Ron Usiewicz

Ronald A. Usiewicz, Ph.D.
Dean
School of Hotel, Restaurant
and Tourism Administration

RAU:lc

APPENDIX B

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
1. Be able to apply sanitary personal habits.									
2. Know appropriate dress for safe working conditions.									
3. Use safe techniques in performing foodservice tasks.									
4. Maintain a clean and sanitary work station.									
5. Handle dishes, food and beverage in sanitary manner.									
6. Select appropriate detergents and sanitizers.									
7. Prepare dishes for machine or hand washing.									
8. Wash and sanitize dishes by hand according to State Health Division approved methods.									
9. Maintain correct water temperatures for all stages of the dishwashing cycle.									
10. Able to operate three standard commercial dishwashing machines.									
11. Know the difference between food poisoning and food-borne illness.									
12. Name three food-borne illnesses, their causes and preventive procedures.									
13. Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.									
14. Demonstrate the technique to aid victims of choking.									
15. Know employee rights and responsibilities according to OSHA.									
16. Be able to obtain a food handler's card.									

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
17. Report accidents promptly and document within 24 hours.									
18. Report to supervisor any equipment in need of repair.									
19. Convert recipes to standardized recipes.									
20. Knowledge of food industry terminology; blanch, fold, marinate.									
21. Identify, use and care for knives properly.									
22. Know proper method for sharpening knives.									
23. Be able to slice and carve meats and poultry.									
24. Work correctly with all kitchen cooking equipment; oven, broiler, and microwave.									
25. Be able to weigh and measure ingredients.									
26. Be able to measure dry and liquid ingredients.									
27. Be able to portion food.									
28. Adapt recipes to quantity needed.									
29. Develops new recipes.									
30. Identify abbreviation for measurements in food production.									
31. State procedures for using a standardized recipe.									
32. Solve problems in increasing and decreasing recipes.									
33. Identify small equipment; hand utensils, can opener, blender.									
34. Use of small equipment correctly.									
35. Identify spices, herbs, seasonings, and extracts that are used in flavoring.									
36. State correct care and storage of spice, herbs, seasonings, and extracts.									

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
37. Properly uses spices, herbs, seasonings and extracts in quantity cookery.									
38. Plan menus in relation to appetite appeal, nutritional adequacy, and cost factors.									
39. Plan menus with dietary consultant on therapeutic menus.									
40. Review menu items for popularity and change items as needed.									
41. Know which vegetables are served during each season.									
42. Describe the use of cycle menus.									
43. Able to break down portion cost of each menu item.									
44. Record menu items sold per meal.									
45. Review menu items for popularity and make necessary changes.									
46. Review prices of food purchased and adjust menu prices accordingly.									
47. Calculate costs in the preparation of food items.									
48. Able to prepare stock from beef, veal, poultry, fish and vegetables.									
49. Prepare brown stock soups.									
50. Prepare consomme and broths.									
51. Prepare tomato soups.									
52. Prepare cream soups and bisques.									
53. Prepare chowders.									
54. Prepare purees.									
55. Prepare a variety of cold soups.									
56. Be able to prepare garnishes.									

CHEF/COOK

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
57.	Be creative and unique with garnish development.									
58.	Place garnish attractively on completed platter.									
59.	Have an aesthetic sense; create attractive and original ways of presenting food.									
60.	Able to prepare a roux.									
61.	Able to use starches as a thickening agent.									
62.	Able to use all standard thickening agents.									
63.	Prepare brown sauces and know their uses.									
64.	Prepare neutral and white sauces and know their uses.									
65.	Prepare egg yolk and vinegar sauces and know their uses.									
66.	Prepare tomato sauces and know their uses.									
67.	Prepare bread sauces and know their uses.									
68.	Prepare sour cream sauces and know their uses.									
69.	Prepare cheese sauces and know their uses.									
70.	Prepare butter sauces and know their uses.									
71.	Prepare milk-based sauces and know their uses.									
72.	Prepare dessert sauces and know their uses.									
73.	Be able to identify meat cuts and USDA grades.									
74.	Be able to identify spoiled and inedible meats.									
75.	Know how to store meats properly.									
76.	Be able to break down the carcass of animals.									
77.	Know dry heat cooking methods for meats; broiling, roasting, baking, barbecuing and sauteing.									
78.	Know moist heat cooking methods for meat; braising, simmering, steaming and blanching.									

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
79. Have knowledge of internal meat temperatures, and predicted yields.									
80. Able to determine doneness by pressure or touch.									
81. Know cooking time for specified degree of doneness.									
82. Able to marinate meats.									
83. Able to identify poultry; chicken, turkey, ducks, geese, squab, capon, and cornish game hens.									
84. Know methods of cooking poultry; roasting, poaching, broiling, frying and sauteing.									
85. Able to prepare poultry for salads, sandwiches and entrees.									
86. Know correct thawing techniques for poultry.									
87. Know correct freezing methods for leftover poultry.									
88. Know various fish classification; salt water, fresh water and shellfish.									
89. Know the composition of fish.									
90. Able to identify spoiled and inedible fish and shellfish.									
91. Know proper storing requirements for fish.									
92. Know correct thawing technique for fish.									
93. Able to clean fish properly.									
94. Able to fillet fish properly.									
95. Know various cooking methods for fish; broiling, baking, sauteing, creaming, poaching, and boiling.									
96. Know various cooking methods for shellfish, broiling, baking, sauteing, and boiling.									
97. Know how to prepare breadings and stuffings.									

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
98. Know proper precedure for breading fish and shellfish.									
99. Recognize by sight the doneness of shellfish.									
100. Know proper storage requirements for shellfish.									
101. Know when certain shellfish are "in-season."									
102. Identify and select quality vegetables.									
103. Know various cooking methods for vegetables; steaming, boiling, blanching, creaming, sauteing and baking.									
104. Know how to prepare fresh, frozen, canned or dehydrated vegetables.									
105. Know proper cleaning methods for vegetables.									
106. Know various cutting techniques for vegetables, dicing, chopping and slicing.									
107. Know correct care and storage for vegetables.									
108. Know when certain vegetables are "in-season."									
109. Know how to prepare fruit; wash, peel, and cut.									
110. Know when certain fruit are "in-season."									
111. Know cooking methods for brown, white, or converted rice.									
112. Know how to prepare a variety of rice dishes.									
113. Know various types of pasta; spaghetti, noodle macaroni, gnocchi, and ravioli.									
114. Know how to make pasta from scratch.									
115. Know correct cooking methods for pasta.									
116. Prepare batter for breaded foods.									
117. Know correct use of deep fryer.									
118. Know how to filter grease for re-use.									
119. Know different types of fats and oils and their uses.									

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
120. Know correct temperatures for deep frying.									
121. Know correct method for frying, seafood, meat, poultry and vegetables.									
122. Prepare hors d'oeuvres; fillings, spreads and dips.									
123. Know different types of bread and crackers.									
124. Prepare finger sandwiches.									
125. Prepare fresh vegetables for a platter.									
126. Prepare devilled eggs.									
127. Prepare different cheese and cold meat platters.									
128. Stuff and cook mushroom caps.									
129. Arrange hors d'oeuvres in an attractive and appetizing way.									
130. Understand the scope of the foodservice industry and its employment opportunities.									
131. Show personal qualities as; good grooming, appropriate dress and cooperative attitude.									
132. Maintain positive human relationships while working with others.									
133. Use time efficiently, practice teamwork, and self-direction in performing tasks.									
134. Perform tasks responsibly, efficiently and demonstrate good work habits.									
135. Understand and meet the standard of excellence in food quality.									
136. Solve problems in food cost control and record-keeping.									
137. Identify basic principles of food purchasing.									
138. Apply knowledge and skills acquired in the classroom.									

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
139. Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.									
140. Demonstrate knowledge and skills needed for continuing training in a school of higher education.									
141. Read and interpret French, German, Italian and Spanish related to the job.									
142. Participate in continuing education programs in the foodservice fields.									
143. Assign, coordinate, participate in and review routine food production tasks performed by foodservice workers.									
144. Checks attendance for members in the unit.									
145. Ability to assign, coordinate, and inspect routine food production tasks.									
146. Assists in distributing hot and cold foods to food carts and trucks.									
147. Leftover foods are labeled, dated, and properly refrigerated.									
148. Leftover amounts are properly communicated to proper production staff.									
149. Follows posted work schedule.									
150. Adheres to institutional tardiness policy.									
151. Knows food cost uses for leftover food.									
152. Ability to quickly correct any errors made in food preparation.									
153. Know purchasing procedures for perishables, staples, and contract items.									

CHEF/COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
154. Know receiving procedures; weighing, quality inspection, and price on invoice.									
155. Know storage procedures for dry goods.									
156. Use correct refrigeration and freezer storage.									
157. Maintain physical inventory for dry goods and food items.									
158. Use correct procedures for issuing supplies.									
159. Rotate stock.									
160. Know how to make ice carving.									

COOK'S ASSISTANT

COMPETENCIES	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
1. Be able to apply sanitary personal habits.									
2. Know appropriate dress for safe working conditions.									
3. Use safe techniques in performing foodservice tasks.									
4. Maintain a clean and sanitary work station.									
5. Handle dishes, food and beverage in a sanitary manner.									
6. Select appropriate detergents and sanitizers.									
7. Prepare dishes for machine or hand washing.									
8. Wash and sanitize dishes by hand according to State Health Division approved methods.									
9. Maintain correct water temperatures for all stages of the dishwashing cycle.									
10. Able to operate three standard commercial dishwashing machines.									
11. Know the difference between food poisoning and food-borne illness.									
12. Name three food-borne illnesses, their causes and preventive procedures.									
13. Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.									
14. Demonstrate the technique to aid victims of choking.									
15. Know employee rights and responsibilities according to OSHA.									
16. Be able to obtain a food handler's card.									

COOK'S ASSISTANT

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
17. Report accidents promptly and document within 24 hours.									
18. Report to supervisor any equipment in need of repair.									
19. Convert recipes to standardized recipes.									
20. Knowledge of food industry terminology; blanch fold, marinate.									
21. Identify, use, and care for knives properly.									
22. Know proper method for sharpening knives.									
23. Be able to slice and carve meats and poultry.									
24. Work correctly with all kitchen cooking equipment; oven, broiler and microwave.									
25. Be able to weigh and measure ingredients.									
26. Be able to measure dry and liquid ingredients.									
27. Be able to portion food.									
28. Adapt recipes to quantity needed.									
29. Develops new recipes.									
30. Identify abbreviation for measurements in food production.									
31. State procedures for using a standardized recipe.									
32. Solve problems in increasing and decreasing recipes.									
33. Identify small equipment; hand utensils, can opener, blender.									
34. Use of small equipment correctly.									
35. Identify spices, herbs, seasonings, and extracts that are used in flavoring.									
36. State correct care and storage of spices, herbs, seasonings, and extracts.									

COOK'S ASSISTANT

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
37.	Properly uses spices, herbs, seasonings and extracts in quantity cookery.									
38.	Review prices of food purchased and adjust menu prices accordingly.									
39.	Able to prepare stock from beef, veal, poultry, fish and vegetables.									
40.	Prepare consommes and broths.									
41.	Prepare tomato soups.									
42.	Prepare cream soups and bisques.									
43.	Prepare chowders.									
44.	Prepare purees.									
45.	Prepare a variety of cold soups.									
46.	Be able to prepare garnishes.									
47.	Be creative and unique with garnish development.									
48.	Place garnish attractively on completed platter.									
49.	Have an aesthetic sense; create attractive and original ways of presenting food.									
50.	Able to prepare a roux.									
51.	Able to use starches as a thickening agent.									
52.	Able to use all standard thickening agents.									
53.	Prepare various salad dressings.									
54.	Prepare brown sauces and know their uses.									
55.	Prepare neutral and white sauces and know their uses.									
56.	Prepare egg yolk and vinegar sauces and know their uses.									
57.	Prepare tomato sauces and know their uses.									
58.	Prepare bread sauces and know their uses.									
59.	Prepare sour cream sauces and know their uses.									

COOK'S ASSISTANT

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
60.	Prepare cheese sauces and know their uses.									
61.	Prepare butter sauces and know their uses.									
62.	Prepare milk-based sauces and know their uses.									
63.	Prepare dessert sauces and know their uses.									
64.	Be able to identify meat cuts and USDA grades.									
65.	Be able to identify spoiled and inedible meat.									
66.	Know how to store meats properly.									
67.	Know dry heat cooking methods for meat; broiling, roasting, baking, barbecuing and sauteing.									
68.	Know moist heat cooking methods for meat; braising, simmering, steaming, and blanching.									
69.	Have knowledge of internal meat temperatures, and predicted yields.									
70.	Able to determine doneness by pressure or touch.									
71.	Know cooking time for specified degree of doneness.									
72.	Able to marinate meats.									
73.	Able to identify poultry; chicken, turkey, ducks, geese, squab, capon, and cornish game hens.									
74.	Know methods of cooking poultry; roasting, poaching, broiling, frying and sauteing.									
75.	Able to prepare poultry for salads, sandwiches, and entrees.									
76.	Know correct thawing techniques for poultry.									
77.	Know correct freezing methods for leftover poultry.									
78.	Know various fish classification; salt water, freshwater, and shellfish.									

COOK'S ASSISTANT

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
79. Know the composition of fish.									
80. Able to identify spoiled and inedible fish and shellfish.									
81. Know proper storing requirements for fish.									
82. Know correct thawing technique for fish.									
83. Able to clean fish properly.									
84. Able to fillet fish properly.									
85. Know various cooking methods for fish; broiling, baking, sauteing, creaming, poaching and boiling.									
86. Know various cooking methods for shellfish; broiling, baking, sauteing, and boiling.									
87. Know how to prepare breadings and stuffings.									
88. Know proper procedure for breading fish and shellfish.									
89. Recognize by sight the doneness of shellfish.									
90. Know proper storage requirements for shellfish.									
91. Identify and select quality vegetables.									
92. Know various cooking methods for vegetables; steaming, boiling, blanching, creaming, sauteing and baking.									
93. Know how to prepare fresh, frozen, canned or dehydrated vegetables.									
94. Know proper cleaning methods for vegetables.									
95. Know various cutting techniques for vegetables; dicing, chopping and slicing.									
96. Know correct care and storage for vegetables.									
97. Know when certain vegetables are "in-season."									
98. know how to prepare fruit; wash, peel and cut.									
99. Know cooking methods for brown, white or converted rice.									

COOK'S ASSISTANT

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
100.	Know how to prepare a variety of rice dishes.									
101.	Know various types of pasta; spaghetti, noodles, macaroni, gnocchi, and ravioli.									
102.	Know correct cooking methods for pasta.									
103.	Peel and blanch potatoes correctly.									
104.	Prepare baked potatoes.									
105.	Cook French fries correctly.									
106.	Prepare batter for breaded foods.									
107.	Know correct use of deep fryer.									
108.	Know how to filter grease for re-use.									
109.	Know different types of fats and oils and their uses.									
110.	Know correct temperatures for deep frying.									
111.	Know correct method for frying, seafood, meat, poultry and vegetables.									
112.	Prepare hors d'oeuvres; fillings, spreads, and dips.									
113.	Know different types of bread and crackers.									
114.	Prepare finger sandwiches.									
115.	Prepare fresh vegetables for a platter.									
116.	Prepare devilled eggs.									
117.	Prepare different cheese and cold meat platters.									
118.	Stuff and cook mushroom caps.									
119.	Arrange hors d'oeuvres in an attractive and appetizing way.									
120.	Change soda syrups.									
121.	Assist in preparation of beverages.									
122.	Show personal qualities as; good grooming, appropriate dress and cooperative attitude.									

COOK'S ASSISTANT

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
123.	Maintain positive human relationships while working with others.									
124.	Use time efficiently, practice teamwork and self-direction in performing tasks.									
125.	Perform tasks responsibly, efficiently and demonstrate good work habits.									
126.	Understand and meet the standard of excellence in food quality.									
127.	Know the life span of food items.									
128.	Apply knowledge and skills acquired in the classroom to work experience.									
129.	Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.									
130.	Demonstrate knowledge and skills needed for continuing training in a school of higher education.									
131.	Read and interpret French, German, Italian, and Spanish related to the job.									
132.	Participate in continuing education programs in the foodservice field.									
133.	Assists in distributing hot and cold foods to food carts and trucks.									
134.	Leftover foods are labeled, dated and properly refrigerated.									
135.	Leftover amounts are properly communicated to proper production staff.									
136.	Follows posted work schedule.									
137.	Adheres to institutional tardiness policy.									

COOK'S ASSISTANT

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
138. Ability to quickly correct any errors made in food preparation.									
139. Know receiving procedures; weighing, quality, inspection and price on invoice.									
140. Know storage procedures for dry goods.									
141. Use correct refrigeration and freezer storage.									
142. Rotate stock.									
143. Carries pans, kettles, and trays to and from work station.									
144. Assist serving food off the line.									
145. Codes dishes for orders.									
146. Handle operational or personnel problems in absence of the chef.									

FOOD PREPARATION HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
1. Be able to apply sanitary personal habits.									
2. Know appropriate dress for safe working conditions.									
3. Use safe techniques in performing foodservice tasks.									
4. Maintain a clean and sanitary work station.									
5. Handle dishes, food and beverage in a sanitary manner.									
6. Select appropriate detergents and sanitizers.									
7. Prepare dishes for machine or hand washing.									
8. Wash and sanitize dishes by hand according to State Health Division approved methods.									
9. Maintain correct water temperatures for all stages of the dishwashing cycle.									
10. Able to operate three standard commercial dishwashing machines.									
11. Know the difference between food poisoning and food-borne illness.									
12. Name three food-borne illnesses, their causes and preventive procedures.									
13. Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.									
14. Demonstrate the technique to aid victims of choking.									
15. Know employee rights and responsibilities according to OSHA.									
16. Be able to obtain a food handler's card.									
17. Report accidents promptly and document within 24 hours.									
18. Report to supervisor any equipment in need of repair.									

FOOD PREPARATION HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
19. Convert recipes to standardized recipes.									
[illegible]. Knowledge of food industry terminology; blanch, fold, marinate.									
21. Identify, use and care for knives properly.									
[illegible]. Know proper method for sharpening knives.									
[illegible]. Be able to slice and carve meats and poultry.									
24. Work correctly with all kitchen cooking equipment; oven, broiler, and microwave.									
[illegible]. Be able to weigh and measure ingredients.									
26. Be able to measure dry and liquid ingredients.									
27. Be able to portion food.									
[illegible]. Adapt recipes to quantity needed.									
29. Develops new recipes.									
30. Identify abbreviation for measurements in food production.									
[illegible]. State procedures for using a standardized recipe.									
32. Solve problems in increasing and decreasing recipes.									
[illegible]. Identify small equipment; hand utensils, can opener, blender.									
34. Use of small equipment correctly.									
[illegible]. Identify spices, herbs, seasonings, and extracts that are used in flavoring.									
36. State correct care and storage of spices, herbs, seasonings, and extracts.									
[illegible]. Properly use spices, herbs, seasonings, and extracts in quantity cookery.									
38. Know which vegetables are served during each season.									
[illegible]. Able to prepare stock from beef, veal, poultry, fish and vegetables.									

FOOD PREPARATION HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
[illegible]. Be able to prepare garnishes.									
[illegible]. Be creative and unique with garnish development.									
42. Place garnish attractively on completed platter.									
[illegible]. Have an aesthetic sense; create attractive and original ways of presenting food.									
44. Prepare tomato sauces and know their uses.									
[illegible]. Be able to identify meat cuts and USDA grades.									
[illegible]. Be able to identify spoiled and inedible meat.									
47. Know how to store meats properly.									
48. Able to identify poultry; chicken, turkey, ducks, geese, squab, capon and cornish game hens.									
[illegible]. Know correct thawing techniques for poultry.									
50. Know correct freezing methods for leftover poultry.									
[illegible]. Know various fish classifications; salt water, freshwater and shellfish.									
52. Able to identify spoiled and inedible fish and shellfish.									
[illegible]. Know proper storing requirements for fish.									
54. Know correct thawing technique for fish.									
55. Able to clean fish properly.									
[illegible]. Know how to prepare breadings and stuffings.									
[illegible]. Know proper procedure for breading fish and shellfish.									
[illegible]. Know proper storage requirements for shellfish.									
[illegible]. Identify and select quality vegetables.									
60. Know various cutting techniques for vegetables; dicing, chopping and slicing.									
[illegible]. Know correct care and storage of vegetables.									

FOOD PREPARATION HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
62. Know when certain vegetables are "in-season."									
63. Know how to prepare fruit; wash, peel, and cut.									
64. Know when certain fruit are "in-season."									
65. Know various types of pasta; spaghetti, noodle, macaroni, gnocchi and ravioli.									
66. Know how to filter grease for re-use.									
67. Know different types of fats and oils and their uses.									
68. Prepare hors d'oeuvres; fillings, spreads and dips.									
69. Know different types of bread and crackers.									
70. Prepare finger sandwiches.									
71. Prepare fresh vegetables for a platter.									
72. Prepare devilled eggs.									
73. Prepare different cheese and cold meat platters.									
74. Stuff and cook mushroom caps.									
75. Arrange hors d'oeuvres in an attractive and appetizing way.									
76. Understand the scope of the foodservice industry and its employment opportunities.									
77. Show personal qualities as; good grooming, appropriate dress and cooperative attitude.									
78. Maintain positive human relationships while working with others.									
79. Use time efficiently, practice teamwork and self-direction in performing tasks.									
80. Perform tasks responsibly, efficiently and demonstrate good work habits.									
81. Understand and meet the standard of excellence in food quality.									

FOOD PREPARATION HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
82. Apply knowledge and skills acquired in the classroom to work experience.									
83. Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.									
84. Demonstrate knowledge and skills needed for continuing training in a school of higher education.									
85. Assists in distributing hot and cold foods to food carts and trucks.									
86. Leftover foods are labeled, dated and properly refrigerated.									
87. Leftover amounts are properly communicated to proper production staff.									
88. Follows posted work schedule.									
89. Adheres to institutional tardiness policy.									
90. Know food cost uses for leftover food.									
91. Ability to quickly correct any errors made in food preparation.									
92. Know storage procedures for dry goods.									
93. Use correct refrigeration and freezer storage.									
94. Maintain physical inventory for dry goods and food items.									
95. Use correct procedures for issuing supplies.									
96. Rotate Stock.									
97. Know how to make ice carving.									

FOOD SERVICE WORKER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
1. Be able to apply sanitary personal habits.									
2. Know appropriate dress for safe working conditions.									
3. Use safe techniques in performing foodservice tasks.									
4. Maintain a clean and sanitary work station.									
5. Handle dishes, food and beverage in a sanitary manner.									
6. Select appropriate detergents and sanitizers.									
7. Prepare dishes for machine or hand washing.									
8. Wash and sanitize dishes by hand according to State Health Division approved methods.									
9. Maintain correct water temperatures for all stages of the dishwashing cycle.									
10. Able to operate three standard commercial dishwashing machines.									
11. Know the difference between food poisoning and food-borne illness.									
12. Name three food-borne illnesses, their causes and preventive procedures.									
13. Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.									
14. Demonstrate the technique to aid victims of choking.									
15. Know employee rights and responsibilities according to OSHA.									
16. Be able to obtain a food handler's card.									
17. Report accidents promptly and document within 24 hours.									
18. Report to supervisor any equipment in need of repair.									
19. Convert recipes to standardized recipes.									

FOOD SERVICE WORKER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
20. Knowledge of food industry terminology; blanch, fold, marinate.									
21. Identify, use and care for knives properly.									
22. Know proper method for sharpening knives.									
23. Be able to slice and carve meats and poultry.									
24. Work correctly with all kitchen cooking equipment; oven, broiler, and microwave.									
25. Be able to weigh and measure ingredients.									
26. Be able to measure dry and liquid ingredients.									
27. Be able to portion food.									
28. Adapt recipes to quantity needed.									
29. Develops new recipes.									
30. Identify abbreviation for measurements in food production.									
31. State procedures for using a standardized recipe.									
32. Know the number of serving portions for each product.									
33. Know the portion size of meat, fish and poultry.									
34. Use spoons or scoops to measure salads and desserts.									
35. Use individual molds with standard portion.									
36. Prepare a variety of salad dressings.									
37. Set up salad bar.									
38. Replenish salad bar.									
39. Set up serving line.									
40. Replenish serving line.									
41. Slice cheeses.									
42. Make puddings and gelatins.									
43. Make dessert toppings, icings.									

FOOD SERVICE WORKER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
44. Cut and plate desserts.									
45. Be able to identify spoiled and inedible meat.									
46. Make hot and cold sandwiches.									
47. Know how to store meats properly.									
48. Warm bread and rolls.									
49. Maintain supply of ready coffee.									
50. Refill juice and soda dispenser.									
51. Refill condiments.									
52. Able to identify spoiled and inedible fish and shellfish.									
53. Know proper storing requirements for fish.									
54. Know correct thawing technique for fish.									
55. Recognize by sight the doneness of shellfish.									
56. Know proper storage requirements for shellfish.									
57. Know proper cleaning methods for vegetables.									
58. Know various cutting techniques for vegetables; dicing, chopping and slicing.									
59. Know correct care and storage for vegetables.									
60. Know various types of pasta; spaghetti, noodles, macaroni, gnocchi and ravioli.									
61. Know how to filter grease for re-use.									
62. Know different types of fats and oils and their use.									
63. Know correct temperatures for deep frying.									
64. Check food temperature before serving.									
65. Prepare hors d'oeuvres; fillings, spreads, and dips.									
66. Know different types of breads and crackers.									
67. Prepare finger sandwiches.									

FOOD SERVICE WORKER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
68. Prepare fresh vegetables for a platter.									
69. Prepare devilled eggs.									
70. Prepare different cheese and cold meat platters.									
71. Stuff and cook mushroom caps.									
72. Arrange hors d'oeuvres in an attractive and appetizing way.									
73. Understand the scope of the food service industry and its employment opportunities.									
74. Show personal qualities as; good grooming, appropriate dress, and cooperative attitude.									
75. Maintain positive human relationships while working with others.									
76. Use time efficiently, practice teamwork, and self-direction in performing tasks.									
77. Perform tasks responsibly, efficiently and demonstrate good work habits.									
78. Understand and meet the standard of excellence in food quality.									
79. Apply knowledge and skills acquired in the classroom to work experience.									
80. Participate in continuing education programs in the foodservice field.									
81. Assists in distributing hot and cold foods to food carts and trucks.									
82. Leftover foods are labeled, dated and properly refrigerated.									
83. Leftover amounts are properly communicated to proper production staff.									
84. Follows posted work schedule.									

FOOD SERVICE WORKER

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
85.	Adheres to institutional tardiness policy.									
86.	Ability to quickly correct any errors made in food preparation.									
87.	Know purchasing procedures for perishables, staples and contract items.									
88.	Know receiving procedures; weighing, quality, inspection and price on invoice.									
89.	Know storage procedures for dry goods.									
90.	Use correct refrigeration and freezer storage.									
91.	Use correct procedures for issuing supplies.									
92.	Maintain physical inventory for dry goods and food items.									
93.	Rotate stock.									
94.	Know how to assist in making ice carvings.									
95.	Handle pressure and a fast pace.									
96.	Shut off equipment when finished.									
97.	Assemble trays according to pre-marked menu for patients.									
98.	Prepare formulas for patients.									
99.	Carry trays for handicapped patients.									
100.	Distribute and collect menus.									
101.	Distribute food trays to floors for distribution.									
102.	Scrapes soiled serviceware upon delivery back to kitchen from hospital floors.									
103.	Record diet changes that are phoned to dietary department.									
104.	Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.									
105.	Demonstrate knowledge and skills needed for continuing training in a school of higher education.									

SHORT ORDER COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
1. Be able to apply sanitary personal habits.									
2. Know appropriate dress for safe working conditions.									
3. Use safe techniques in performing foodservice tasks.									
4. Maintain a clean and sanitary work station.									
5. Handle dishes, food and beverage in a sanitary manner.									
6. Select appropriate detergents and sanitizers.									
7. Prepare dishes for machine or hand washing.									
8. Wash and sanitize dishes by hand according to State Health Division approved methods.									
9. Maintain correct water temperatures for all stages of the dishwashing cycle.									
10. Able to operate three standard commercial dishwashing machines.									
11. Know the difference between food poisoning and food-borne illness.									
12. Name three food-borne illnesses, their causes and preventive procedures.									
13. Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.									
14. Demonstrate the technique to aid victims of choking.									
15. Know employee rights and responsibilities according to OSHA.									
16. Be able to obtain a food handler's card.									
17. Report accidents promptly and document within 24 hours.									
18. Convert recipes to standardized recipes.									

SHORT ORDER COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
19. Report to supervisor any equipment in need of repair.									
20. Knowledge of food industry terminology; blanch, fold, marinate.									
21. Identify, use and care for knives properly.									
22. Know proper method for sharpening knives.									
23. Be able to slice and carve meats and poultry.									
24. Work correctly with all kitchen cooking equipment; oven, broiler and microwave.									
25. Be able to weigh and measure ingredients.									
26. Be able to measure dry and liquid ingredients.									
27. Be able to portion food.									
28. Adapt recipes to quantity needed.									
29. Develops new recipes.									
30. Identify abbreviation for measurements in food production.									
31. State procedures for using a standardized recipe.									
32. Solve problems in increasing and decreasing recipes.									
33. Identify small equipment; hand utensils, can opener, blender.									
34. Use of small equipment correctly.									
35. Identify spices, herbs, seasonings and extracts that are used in flavoring.									
36. State correct care and storage of spices, herbs, seasonings, and extracts.									
37. Properly use spices, herbs, seasonings, and extracts in quantity cookery.									
38. Describe the use of cycle menus.									

SHORT ORDER COOK

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
39.	Review menu items for popularity and change items as needed.									
40.	Review menu items for popularity and make necessary changes.									
41.	Able to prepare stock from beef, veal, poultry fish, and vegetables.									
42.	Prepare brown stock soups.									
43.	Prepare tomato soups.									
44.	Prepare cream soups and bisques.									
45.	Prepare chowders.									
46.	Prepare purees.									
47.	Ladle soups.									
48.	Be able to prepare garnishes.									
49.	Place garnish attractively on completed platter.									
50.	Able to prepare a roux.									
51.	Able to use starches as a thickening agent.									
52.	Able to use all standard thickening agents.									
53.	Prepare brown sauces and know their uses.									
54.	Prepare tomato sauces and know their uses.									
55.	Prepare cheese sauces and know their uses.									
56.	Prepare butter sauces and know their uses.									
57.	Be able to identify meat cuts and USDA grades.									
58.	Be able to identify spoiled and inedible meat.									
59.	Know how to store meats properly.									
60.	Tenderize meats.									
61.	Grind meat correctly.									
62.	Know dry heat cooking methods for meat; broiling, roasting, baking, barbecuing and sauteing.									
63.	Know moist heat cooking methods for meat; braising simmering, steaming and blanching.									

SHORT ORDER COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
64. Have knowledge of internal meat temperatures, and predicted yields.									
65. Able to determine doneness by pressure or touch.									
66. Know cooking time for specified degree of doneness.									
67. Able to identify poultry; chicken, turkey, ducks, geese, squab, capon and cornish game hens.									
68. Know methods of cooking poultry; roasting, poaching, broiling, frying and sauteing.									
69. Able to prepare poultry for salads, sandwiches, and entrees.									
70. Know correct thawing techniques for poultry.									
71. Know correct freezing methods for leftover poultry.									
72. Know cooking methods for eggs; boiled, coddled, poached, fried and scrambled.									
73. Recognize spoiled and inedible eggs.									
74. Make breakfast dishes, pancakes, french toast, and omelets.									
75. Cook bacon, sausage and ham.									
76. Toast breads.									
77. Able to identify spoiled and inedible fish and shellfish.									
78. Know proper storing requirements for fish.									
79. Know correct thawing technique for fish.									
80. Able to clean fish properly.									
81. Able to fillet fish properly.									
82. Know various cooking methods for fish; broiling, baking, sauteing, creaming, poaching and boiling.									
83. Know how to prepare breadings and stuffings.									

SHORT ORDER COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
84. Know various cooking methods for shellfish; broiling, baking, sauteing and boiling.									
85. Know proper procedure for breading fish and shellfish.									
86. Recognize by sight the doneness of shellfish.									
87. Know proper storage requirements for shellfish.									
88. Open clams and oysters correctly.									
89. Know various cooking methods for vegetables; steaming, boiling, blanching, creaming, sauteing and baking.									
90. Know how to prepare fresh, frozen, canned or dehydrated vegetables.									
91. Know proper cleaning methods for vegetables.									
92. Know various cutting techniques for vegetables; dicing, chopping and slicing.									
93. Know correct care and storage for vegetables.									
94. Know how to prepare fruit; wash, peel and cut.									
95. Know cooking methods for brown, white or converted rice.									
96. Know how to prepare a variety of rice dishes.									
97. Know various types of pasta; spaghetti, noodle, macaroni, gnocchi, and ravioli.									
98. Know correct cooking methods for pasta.									
99. Prepare batter for breaded foods.									
100. Know correct use of deep fryer.									
101. Know how to filter grease for re-use.									
102. Know different types of fats and oils and their use.									
103. Know correct temperatures for deep frying.									

SHORT ORDER COOK

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
104.	Know correct method for frying; seafood, meat, poultry and vegetables.									
105.	Prepare hot sandwiches by broiling or grilling.									
106.	Prepare cold sandwiches; open-face, rolled, pinwheel and layered.									
107.	Prepare hors d'ouevres; fillings, spreads, and dips.									
108.	Know different types of bread and crackers.									
109.	Prepare finger sandwiches.									
110.	Prepare fresh vegetables for a platter.									
111.	Prepare devilled eggs.									
112.	Prepare different cheese and cold meat platters.									
113.	Stuff and cook mushroom caps.									
114.	Arrange hors d'oeuvres in an attractive and appetizing way.									
115.	Understand the scope of the foodservice industry and its employment opportunities.									
116.	Show personal qualities as; good grooming, appropriate dress and cooperative attitude.									
117.	Maintain positive human relationships while working with others.									
118.	Use time efficiently, practice teamwork and self-direction in performing tasks.									
119.	Perform tasks responsibly, efficiently and demonstrate good work habits.									
120.	Understand and meet the standard of excellence in food quality.									
121.	Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.									

SHORT ORDER COOK

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
122. Demonstrate knowledge and skills needed for continuing training in a school of higher education.									
123. Read and interpret French, German, Italian, and Spanish related to the job.									
124. Participate in continuing education programs in the foodservice field.									
125. Functions as a lead worker during shift when necessary.									
126. Assists in distributing hot and cold foods to food carts and trucks.									
127. Leftover foods are labeled, dated, and properly refrigerated.									
128. Leftover amounts are properly communicated to proper production staff.									
129. Follows posted work schedule.									
130. Adheres to institutional tardiness policy.									
131. Know food cost uses for leftover food.									
132. Ability to quickly correct any errors made in food preparation.									
133. Know receiving procedures; weighing, quality, inspection and price on invoice.									
134. Know storage procedures for dry goods.									
135. Use correct refrigeration and freezer storage.									
136. Use correct procedures for issuing supplies.									
137. Rotate stock.									
138. Replenish food on line.									
139. Able to read, understand and write English.									
140. Possess basic math skills.									
141. Fill all orders for a customer quickly and correctly.									

BAKER'S HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
1. Be able to apply sanitary personal habits.									
2. Know appropriate dress for safe working conditions.									
3. Use safe techniques in performing foodservice tasks.									
4. Maintain a clean and sanitary work station.									
5. Handle dishes, food and beverage in a sanitary manner.									
6. Select appropriate detergents and sanitizers.									
7. Prepare dishes for machine or hand washing.									
8. Wash and sanitize dishes by hand according to State Health Division approved methods.									
9. Maintain correct water temperatures for all stages of the dishwashing cycle.									
10. Able to operate three standard commercial dishwashing machines.									
11. Know the difference between food poisoning and food-borne illness.									
12. Name three food-borne illnesses, their causes and preventive procedures.									
13. Select and use fire extinguishers appropriate for each type of fire; grease, trash, chemical and electrical.									
14. Demonstrate the technique to aid victims of choking.									
15. Know employee rights and responsibilities according to OSHA.									
16. Be able to obtain a food handler's card.									
17. Report accidents promptly and document within 24 hours.									
18. Report to supervisor any equipment in need of repair.									

BAKER'S HELPER

COMPETENCIES

		PROFICIENCY						FREQUENCY		
		No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
		1	2	3	4	5		A	B	C
19.	Convert recipes to standardized recipes.									
20.	Knowledge of food industry terminology; blanch, fold, marinate.									
21.	Know baking terminology.									
22.	Identify, use and care for knives properly.									
23.	Be able to slice and carve meats and poultry.									
24.	Work correctly with all kitchen cooking equipment; oven, broiler and microwave.									
25.	Know both English and metric measuring systems.									
26.	Be able to weigh and measure ingredients.									
27.	Be able to measure dry and liquid ingredients.									
28.	Be able to portion food.									
29.	Adapt recipes to quantity needed.									
30.	Develops new recipes.									
31.	Identify abbreviation for measurements in food production.									
32.	State procedures for using a standardized recipe.									
33.	Solve problems in increasing and decreasing recipes.									
34.	Identify small equipment; hand utensils, can opener, blender.									
35.	Use of small equipment correctly; duchess dough divider, dough scale, proof box.									
36.	Identify spices, herbs, seasonings, and extracts that are used in flavoring.									
37.	State correct care and storage of spices, herbs, seasonings, and extracts.									
38.	Properly use spices, herbs, seasonings, and extracts in quantity cookery.									

BAKER'S HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
39. Plan menus in relation to appetite appeal, nutritional adequacy and cost factors.									
40. Review menu items for popularity and change items as needed.									
41. Able to break down portion cost of each menu item.									
42. Record menu items sold per meal.									
43. Review menu items for popularity and make necessary changes.									
44. Review prices of food purchased and adjust menu prices accordingly.									
45. Know the effects of salt and sugar on yeast.									
46. Know the different types of sugar.									
47. Use a pastry bag.									
48. Prepare different types of frosting; icings and meringues.									
49. Use decorating tips accordingly.									
50. Know various types of desserts; cream-filled, muffins, biscuits.									
51. Prepare pans; grease or line loaf pans.									
52. Place hand cut cookies on lined sheet pan at proper space.									
53. Scoop drop cookies to level scoop onto lined sheet pan to pattern.									
54. Place pans in dough oven to bake.									
55. Remove baked products from oven and place on racks.									
56. Prepare candy.									
57. Prepare petit four and pate choux products.									
58. Tell time correctly.									
59. Read thermometer correctly.									

BAKER'S HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
60. Mix and knead dough correctly.									
61. Bake various types of bread.									
62. Have knowledge of nutritive value of bread and rolls.									
63. Know correct cooking temperatures and humidity.									
64. Know different mixer sizes and use them correctly.									
65. Use correct whipping technique.									
66. Separate eggs correctly.									
67. Know various types of flours and shortenings.									
68. Sift flour correctly.									
69. Make fruit fillings lump-free.									
70. Know different types of bread and crackers.									
71. Place dough in proof box for rising.									
72. Roll out dough for pie crust and pastry correctly.									
73. Know when certain fruits are in-season.									
74. Know correct use of deep fryer.									
75. Know how to filter grease for re-use.									
76. Know different types of fats and oils and their uses.									
77. Know correct temperatures for deep frying.									
78. Prepare hors d'oeuvres; fillings, spreads, dips.									
79. Know how to make pasta from scratch.									
80. Arrange hors d'oeuvres in an attractive and appetizing way.									
81. Understand the scope of the foodservice industry and its employment opportunities.									
82. Show personal qualities as; good grooming, appropriate dress and cooperative attitude.									

BAKER'S HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
83. Maintain positive human relationships while working with others.									
84. Use time efficiently, practice teamwork, and self-direction in performing tasks.									
85. Perform tasks responsibly, efficiently and demonstrate good work habits.									
86. Understand and meet the standard of excellence in food quality.									
87. Solve problems in food cost control and record-keeping.									
88. Identify basic principles of food purchasing.									
89. Apply knowledge and skills acquired in the classroom to work experience.									
90. Demonstrate knowledge and skills needed for entry-level employment in the foodservice industry.									
91. Demonstrate knowledge and skills needed for continuing training in a school of higher education.									
92. Read and interpret French, German, Italian and Spanish related to the job.									
93. Participate in continuing education programs in the foodservice field.									
94. Leftover foods are labeled, dated and properly refrigerated.									
95. Leftover amounts are properly communicated to proper production staff.									
96. Follows posted work schedule.									
97. Adheres to institutional tardiness policy.									
98. Know food cost uses for leftover food.									
99. Ability to quickly correct any errors made in food preparation.									

BAKER'S HELPER

COMPETENCIES

	PROFICIENCY						FREQUENCY		
	No Proficiency	Slight Proficiency	Moderate Proficiency	Considerable Proficiency	Complete Proficiency		Never	Occasionally	Constantly
	1	2	3	4	5		A	B	C
100. Know purchasing procedures for perishables, staples, and contract items.									
101. Know receiving procedures; weighing, quality, inspection and price on invoice.									
102. Know storage procedures for dry goods.									
103. Store fillings between 35°F and 38°F.									
104. Use correct refrigeration and freezer storage.									
105. Maintain physical inventory for dry goods and food items.									
106. Use correct procedures for issuing supplies.									
107. Rotate stock.									
108. Know how to make ice carving.									
109. Prepare cheese sauces and know their uses.									
110. Prepare butter sauces and know their uses.									
111. Prepare dessert sauces and know their uses.									

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